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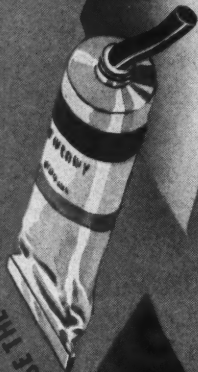
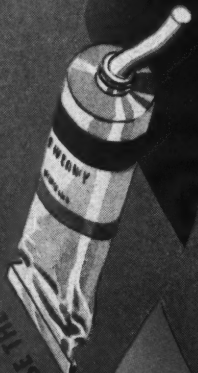
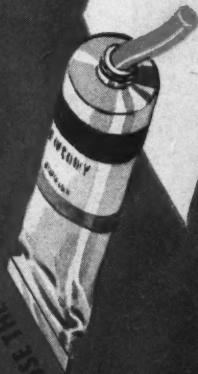


USE THE RED TO SEE THE YELLOW

USE THE YELLOW TO SEE THE RED

USE THE LIGHT TO SEE THE DARK

USE THE DARK TO SEE THE LIGHT



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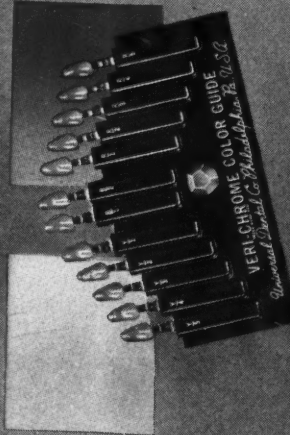
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# Dental Digest

## JUNE 1948

### About Our

### CONTRIBUTORS

WILLIAM ROY EBERLE, D.D.S. (Northwestern University, Dental School, 1914) will be remembered as the author of RATIONALE OF DENTURE RETENTION in the June 1946 issue. His current article deals with maxillary dentures for flat palates in cases with little or no tuberosity. A NEW TECHNIQUE FOR DIFFICULT MAXILLARY DENTURES was developed by Doctor Eberle in his general practice. Its distinguishing feature is the creation of "cupping" action to resist displacement in all directions.

S. IRVING COPEN, D.M.D. (Tufts College Dental School, 1918) practices general dentistry. He has taught anesthesia and is a member of the International Anesthesia Research Society. A recent illness requiring much parenteral medication led him to seek a solution of THE PROBLEM OF APPREHENSION AND ANXIETY IN DENTISTRY. He presents the basis for his reasoning in this issue and next month will describe his method of premedicating the distressed patient by administering an analgesic-sedative and a local anesthetic at the same time.

The last in a series of three articles by George A. Morgan, L.D.S., D.D.S., on Problems in Differential Diagnosis is ANOMALIES OF THE ANTERIOR REGION OF THE MANDIBLE. The preceding articles dealt with burning sensations in the mouth and cysts in the maxillary region. Other biographic data appeared in the issues carrying them. I. FRANKLIN MILLER, B.S., M.S., D.D.S. (University of Pittsburgh, School of Dentistry, 1935, 1936, and 1936 respectively) has a special interest in acrylics in his general practice. Two previous DIGEST articles by him concerned this subject. Architectural features essential for THE GOLD AND ACRYLIC FIXED BRIDGE are discussed this month; likewise, two features that are essential for all fixed bridges; namely, jacket crowns and soldered mechanical joints.

ROBERT A. ATTERBURY, B.S., D.D.S. (University of Illinois, College of Dentistry, 1942) reports on his observation of oral symptoms in a case of acute monocytic leukemia he encountered in his practice and immediately hospitalized. Extensive slough and profound sepsis developed during the two months between the patient's appearance in the dental office and her death. Doctor Atterbury is an oral surgeon. He has published several times in the dental literature during recent years.

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# A New Technique for Difficult MAXILLARY DENTURES

WILLIAM ROY EBERLE, D.D.S., Chicago

## DIGEST

*Maxillary dentures slip anteriorly when the palate is flat and there is little or no tuberosity. To meet the problem presented by such an anatomic combination, a technique has been devised for creating a "cupping" action in the denture which resists displacement in all directions. The result is a useful, comfortable appliance for the patient with a difficult edentulous maxilla.*

*It is conceded that the "cupping" scheme is not wholesome to tissues but the only displaced tissue is the movable periphery. At any rate, the dentist's choice of methods is highly restricted in solving this problem.*

*(1) A stable base is secured with zorite resinous cement; (2) even tension, combined with a positive and excessive postdam, is obtained by means of synthetic impression wax. (This equal encroachment produces the "cupping" action.)*

IN PROSTHODONTICS the utility of an appliance or restoration seems to be proportionate to the dentist's ability to classify a case and predict the results of treatment. The case presented is in a category that one should accept for treatment with caution. Cases such as this one are not uncommon and have the following characteristics (Fig. 1):

1. Little or no tuberosity.
2. An almost flat palate.
3. A flabby, perhaps pendulous, anterior ridge.
4. Usually, a small total area.

In the case reported a wide range of methods had been used without satisfactory results. To promise such a queasy case anything like normal incisory action would be imprudent. The patient should instead be informed of the desperate nature of his predicament. However, a careful analysis of the cause of past failures in this case did evolve a technique which achieved a useful, comfortable denture for the patient. In addition, the technique was successfully applied in similar cases.

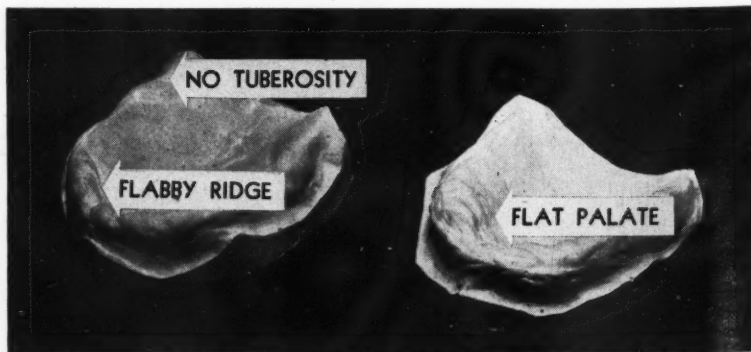
## Analysis of Failures

*Instability*—The primary requisite of any denture base appears to be stability; stability meaning here that the base can bear a load in any area with-

out sagging. It implies a fixed relationship between the base and the bone, or, to put it quite simply, the absence of teeter-tottering. It has been found that a precise impression carefully made without displacing tissue (a static or passive mucosa) will, when tested, prove stable according to this definition.

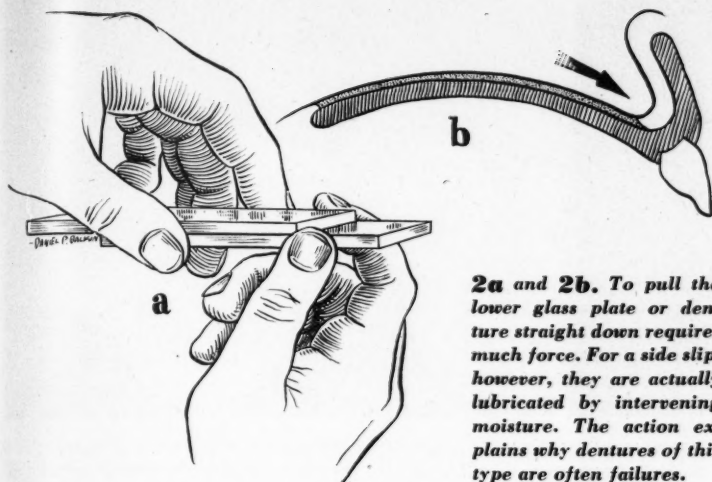
Previous impressions of the case reported had been made under a force system which had displaced the flabby anterior ridge and resulted in insecurity in the incisory area. But by using a tray with no labial flange and a heavy (mortar-like) mix of a resinous cement (zorite), it would be possible to observe the soft ridge and guard against disturbance while an impression was being made. Flanges could then be added with additional thick mixes of the cement without removing the palate portion.

Indeed, an impression made in this way was stable and highly retentive. Complete intimate contact with the tissue had produced, in addition to stability, a strong, adhesive tension;



1. Casts of two cases with characteristics in common.





**2a and 2b.** To pull the lower glass plate or denture straight down requires much force. For a side slip, however, they are actually lubricated by intervening moisture. The action explains why dentures of this type are often failures.

and like two plates of glass with intervening moisture, great force, applied at a right angle to the surfaces, was necessary to disengage the impression. When force was applied in an anterior direction, parallel to the contiguous surfaces, however, the impression could be removed with ease (Figs. 2A and 2B).

venting the forward slip. It was believed that additional retention could be obtained by encroachment on the moving peripheral tissue.

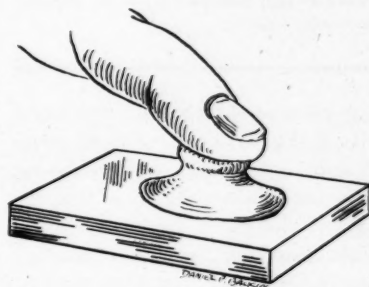
#### Rationale of Success

All are familiar with the "cupping" action of soft rubber in the form of a shallow cup. The elastic rebound of

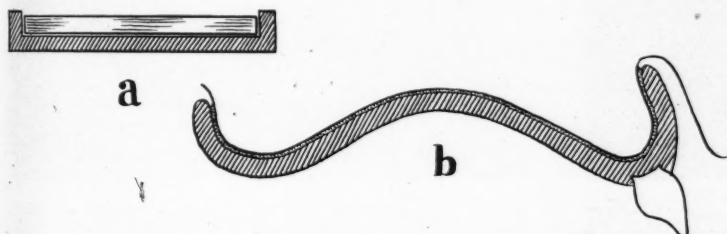
rubber cup, it will help to understand what apparently occurs.

To exploit this phenomenon of buoyancy of the air effectively, there must be a quite even distribution of the encroachment. Excessive pressure in any one area would cause reper- cussion by (1) the recoiling of the tissue and (2) subsequent inflammation and swelling, either or both of which would defeat the intention.

It is obvious that to secure the "cupping" action, the definite line at which tension begins, that is, the pas-



**4.** Rubber vacuum cup in this phenomenon of "cupping" is analogous to the movable peripheral tissue, and the glass plate—to the denture. Unlike the two glass plates, displacement is resisted in all directions. Motion and resiliency are needed for this phenomenon, however, and the tissue supplies the resiliency while the motion is produced by the occlusion.



**3a and 3b.** A prominent tuberosity on the ridge, like a flange on the glass plate, prevents slipping. That is why upper dentures with a high ridge and tuberosity are comparatively easy to construct.

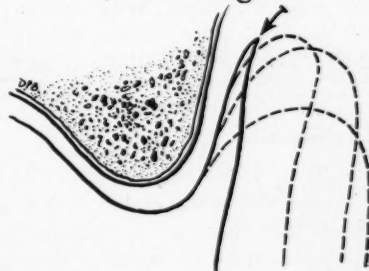
**Forward Slip**—It was assumed that the forward slip and consequent failure of dentures for difficult maxillary cases was due to (1) the component of motion being always forward,<sup>1</sup> a mechanical situation over which we have little control;<sup>2</sup> (2) lack of tuberosity to prevent a forward slide (Figs. 3A and 3B); (3) a flat palate which offered no resistance.

The crux of the problem therefore appeared to be some means of pre-

the rubber brought about by pushing the center sets up a partial vacuum and makes displacement in all directions difficult (Fig. 4). This action is quite unlike the phenomenon of interfacial tension. To simulate the phenomenon of "cupping" and thus neutralize the forward skid, there are two essentials: (1) There must be motion, and (2) there must be resiliency. Tissue has the required resiliency and the motion is provided by the properly occluded pressure of the mandibular teeth.

If one visualizes the denture as the glass plate and the tissue as the

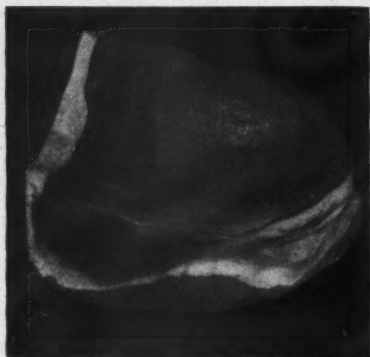
Point where tension begins



**5.** Common practice of "muscle trimming," or functional periphery, is not reliable for establishing the point where tension begins. This practice is comparable to taking a time photograph of a man walking. In the cross section illustrated, heavy line represents position of relaxed tissue as taken with a free flowing impression material; dotted lines represent result with bulky and resistant materials requiring force to "muscle trim."

<sup>1</sup>Stallard, Harvey: The Anterior Component of the Force of Mastication and Its Significance to the Dental Apparatus, D. Cosmos 65:457-474 (May) 1923.

<sup>2</sup>Eberle, W. R.: Rational of Denture Retention, DENTAL DIGEST 52:315-322 (June) 1946.



**6.** Tray of double thick baseplate reinforced across hard palate and made short of soft palate. No flange anterior to molar region.

sive position of the moving peripheral tissue (Fig. 5), *must first be established*. This has been done by the use of a resinous cement softer than the fold of the tissue. Impression materials requiring "muscle trimming" would not properly establish the line.

### Securing Even Tension

With the definite flexion line established, the even tension is secured by a roll of synthetic impression wax for buccal and labial sides; the postdam tension is evenly set up by scraping the cast to the depth of about  $1\frac{1}{2}$  millimeters.

The novelty of this method consists in (1) obtaining a stable base; (2) securing a static or inert position of soft peripheral tissue, and (3) with this as a zero point, adding positive tension with synthetic impression wax to produce a "cupping" action.

### Technique

1. From a preliminary cast, make a double thick baseplate tray with no flanges from the molar area forward. Keep short of the soft palate (Fig. 6).

2. Patient should be sitting almost upright.

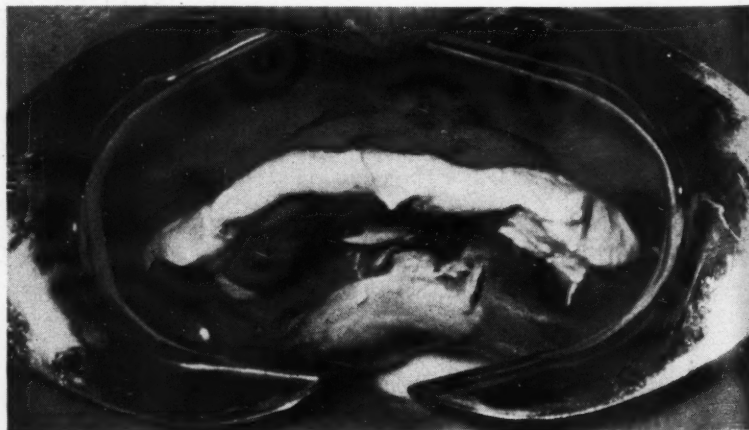
3. Mix resinous cement (zorite) to consistency of mortar (never thin and runny). In hot humid weather, add enough ordinary talcum to zinc oxide powder to obtain such a consistency. (This cement is used because it flows without forcing, sets to brittle hardness, and permits additions to be made in the mouth.)



**7.** Cement is mixed thick (like stone plaster) and piled to rear of tray. In humid weather talcum powder is added to the zinc oxide to slow set and produce this viscosity.



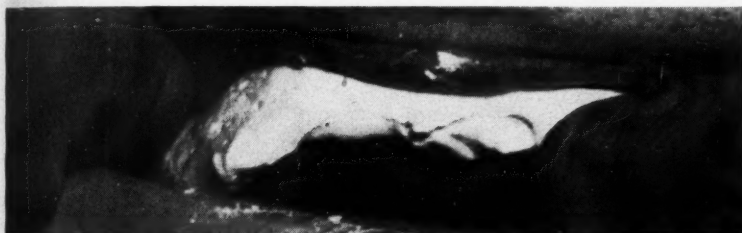
**8.** Start at the rear and flow cement forward. Absence of anterior flange permits constant view of flabby ridge.



**9.** Fingers are removed; pendulous tissue as well as palate are undisturbed and precisely reproduced.



**10.** With patient reclining, additional cement is mixed and packed in each vestibule (to the labial frenum) with a spatula, after drying with gauze. Lips are then relaxed.



**11.** After cement is brittle hard, syringe with cold water and pull down with index fingers at posterior buccal corners.

**12.** An impression at this stage in cases in which the palate has been cast

of chrome nickel alloy. Cement flanges are added to the metal and case is now ready for impression wax. (Observe great detail and peripheral contour. Point where tension begins has been established without using muscle motion or force.)

4. Pile the mix in the rear and center of the tray (Fig. 7). Have the patient swallow hard to eliminate saliva. Wipe the palate with a sponge and insert the tray posteriorly with a flushing motion toward the front, like painting an inlay (Fig. 8).

5. Carefully observe that the pendulous tissue is not disturbed. The cement should be thick and viscid enough so that the fingers may be removed almost at once to prevent any chance of distorting the ridge or soft palatal tissues (Fig. 9).

6. After several minutes tilt the patient to a *reclining position*.

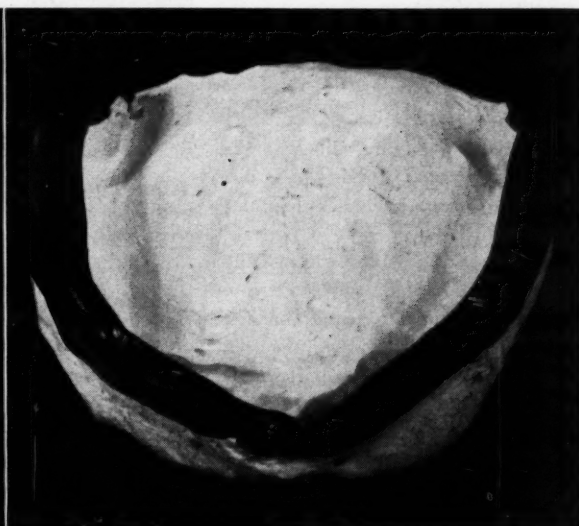
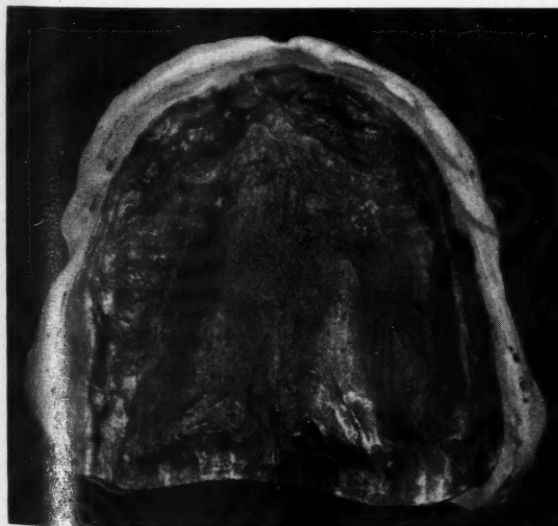
7. Do not remove the palate impression. Pack gauze into each cheek.

8. Make two additional thick mixes of cement and after removing the gauze, pack the cement into each vestibule (Fig. 10). Tell the patient to relax lips and remain quiet.

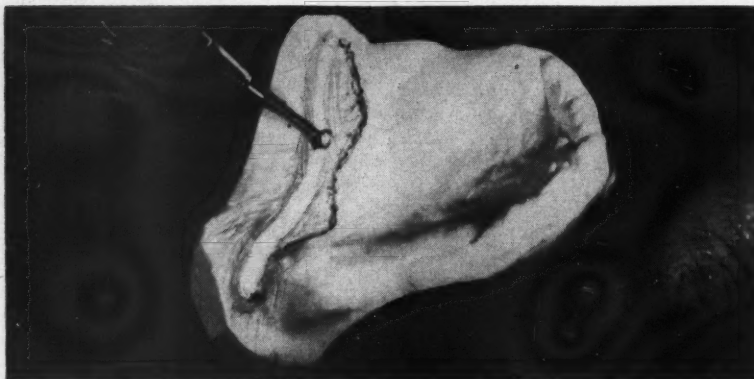
9. When the cement tests brittle hard, syringe it with cold water. Remove by placing the index fingers at each posterior buccal border and pulling down on both sides of the impression simultaneously (Fig. 11).

10. Wash well with cold water and trim extraneous pieces with scissors or knife.

**13.** A ¼-inch roll of synthetic impression wax is warmed, luted to established flexion line, and returned to mouth. The wax has 98° flow at body temperature but is hard at 70°. An even encroachment is thus made on the movable periphery.







**14.** Soft palate has been recorded in a state of rest. An even tension is secured here by sinking a number 10 bur along a line extending from hamular notch to hamular notch.

11. Return the impression to the mouth for testing. It should bear heavy pressure in any area without tipping. Any teeter-tottering effect indicates the need for a new effort at this point (Fig. 12).

12. Soften synthetic impression wax by flaming or immersing in water at about 110° Fahrenheit and fashion a roll from about  $\frac{1}{8}$  to  $\frac{1}{4}$  inch thick. Apply to the periphery with fingers excluding postdam area. Lute with hot spatula (Fig. 13).

13. Place in position and instruct the patient to suck vigorously for about five minutes. Wax flows 98 per cent at body temperature but is hard at 70° Fahrenheit. Chill with ice water and remove.

14. Pour the cast carefully. No separating fluid is needed. Remove the impression from the cast with hot tap water (150°).

15. The postdam (most important) is secured by sinking one-half the depth of a number 10 bur across this area from hamular notch to hamular notch (Fig. 14).

(This type of mouth will usually tolerate considerable distal extension, sometimes as much as 10 millimeters, onto the soft palate except in the area of the foveae palatinae and hamular notch.)

16. With a pointed scraper taper the depth to zero well onto the hard palate (Figs. 15A and 15B). Avoid "rounding" the posterior periphery

on the tissue side of the finished denture. "Rounding" is less effective. A sharp margin will not irritate the soft palate if the technique has been followed carefully (Figs. 16A and 16B).

### Summary

1. Maxillary dentures of the class illustrated fail because a flat palate

and little or no tuberosity allow an anterior slip.

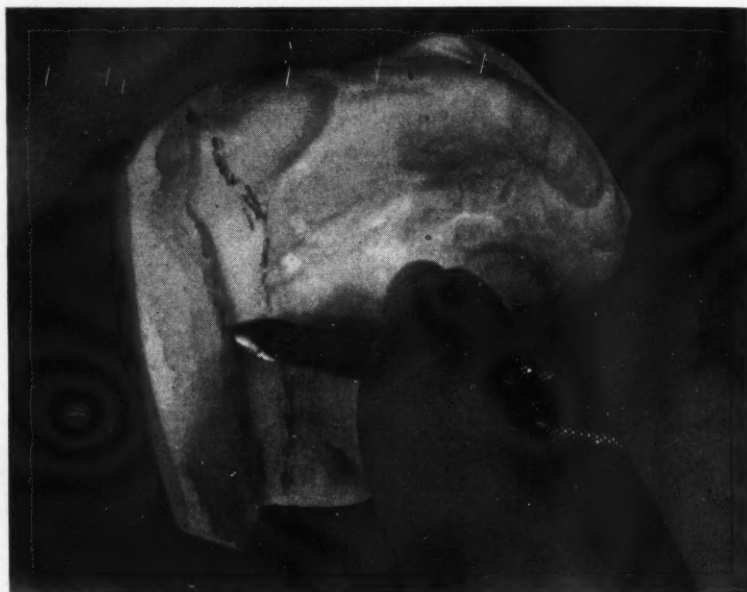
2. The "cupping" action, brought about by equalized overextension, resists displacement in all directions.

3. Zorite resinous cement is used in the technique to secure stability and synthetic impression wax to obtain equal encroachment combined with a positive and excessive postdam.

### Conclusions

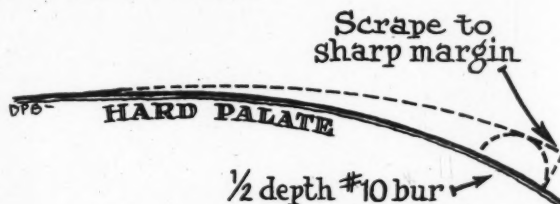
1. The use of encroachment and the "cupping" scheme is admittedly not wholesome to tissues, but in this difficult situation the prosthodontist has no choice. The method outlined is not injurious to ridge mucosa because the only displaced or squeezed tissue is the movable periphery.

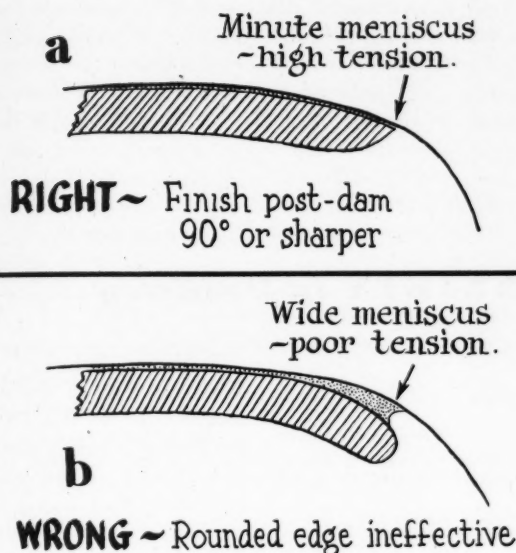
2. It is presumed axiomatic that the complete utility of any upper denture depends largely on exact articulation.



**15a.** With a pointed scraper, cut to established depth and taper back to zero well onto hard palate. Considerable distal extension is tolerated except in the center and over hamular notches.

**15b.** A schematic detail of the scraping.





**16a and 16b.** Whether the case is finished in metal or plastic, the posterior periphery should not be rounded.

Precise articulation helps to equalize the forward component.<sup>1</sup> Resorting to so-called mechanical or flat teeth with careless centric balance will accentuate

the forward slip, the very factor that we have attempted to neutralize in the impression procedure.  
1525 East 53rd Street.

## Plastic Tubing in the Treatment of Chronic Sinusitis

TREATMENT is reported of fifteen cases of chronic maxillary sinusitis (of more than three months' duration) by irrigation with penicillin solution through plastic tubing.<sup>1</sup> The tubing used was a polymer of ethylene, not containing a plasticiser. It can be boiled, is not opaque to x-rays, is well tolerated by the tissues, and can be retained for fifteen days without discomfort.

### Irrigation Procedure

1. The inferior meatus was anesthe-

tized with 2 per cent pontocaine.

2. A Coakley trocar or Lichwitz needle was inserted into the maxillary sinus and the sinus irrigated with sterile physiologic sodium chloride solution to obtain material for culture.

3. With the trocar held in position, a section of plastic tubing 0.7 to 1.5 millimeters in diameter and 13 centimeters long was threaded through the trocar until approximately 5 centimeters entered the sinus.

4. The trocar was then carefully withdrawn, while the tubing was held in position with a probe or forceps.

The tubing was curved about the lobule of the nostril and either fixed with liquid adhesive, or collodion and cotton were applied to the ala of the nose and the tubing.

5. A buffered solution of penicillin, 500 units per cubic centimeter, was used to irrigate the sinus through this tubing once or twice daily for five to fifteen days.

(All patients were also given systemic treatment with penicillin 300,000 units and sulfadiazine 90 grains daily for seven days.)

### Results

Bacteriologic studies showed *Staphylococcus aureus* to be present in 13 cases, in pure culture in 6.

1. Twelve of the 15 patients showed marked improvement in five days, not only subjectively but by the return of clear penicillin solution in repeated irrigations.

2. Six patients were declared cured, but three of these required a repetition of the treatment for an exacerbation of the suppurative process in the sinus associated with a subsequent upper respiratory infection.

3. Six were much improved, but not cured; some of these patients will probably show an exacerbation of the sinus infection.

4. Three with allergy and infection failed to improve.

### Comment

In those instances in which the sinus cannot be lavaged through the middle meatus with minimum trauma, a window operation followed by the above outlined procedure will give lasting results.

—From *Medical Times* 76:92 (February) 1948.

<sup>1</sup>Conley, J. J.: The Use of Plastic Tubing in the Treatment of Chronic Maxillary Sinusitis, *Ann. Otol., Rhin. & Laryng.* 56:678 (September) 1947.

## **The Problem of**

# **APPREHENSION and ANXIETY in Dentistry**

**S. IRVING COPEN, D.M.D., Boston**

### **DIGEST**

*That there are some dental cases, involving local anesthesia, which warrant the alleviation of apprehension and anxiety through pre-medication of the patient; that the emotional reaction stimulated by anxious anticipation should, in truth, be considered to be a part of the operation and just as subject to relief as the operative area, is the thesis presented here.*

*The author's background for his contention is an extended and painful illness. This experience inspired a genuine sympathy for dental patients whose mental anguish was overlooked because it was considered necessary only to relieve their physical pain.*

*Doctor Copen devised a procedure for administering simultaneously a local anesthetic and an analgesic-sedative, which was the subject of the editorial in the June 1947 Digest. An original article referred to therein, **Pre-Medication by Co-Medication in Local Anesthesia**, describes the technique of administration. An adaptation of this article will appear next month.*

WHAT WE are seeking is an insight into the nature of apprehension and anxiety. We all know there are two great motivating forces in life: the

will to live and the desire to avoid pain.

1. The drive toward procreation, security, survival, love fulfillment, and pride of family expresses the *will to live*. This force impels us from our first breath to our last.

2. The *desire to avoid pain* shapes our lives into a thousand ingrained and complex habit patterns.

### **Effects of Mental Distress**

The way in which people escape pain and emotional trauma—suppressing painful remembrances and recognitions and building wall upon wall and barrier upon barrier to hold out the truths for which they have no fortitude—shapes the complexity of their psychic patterns. For example, millions of mature men and women prefer physical suffering, in the form of avoidable illnesses, to the acceptance of their true emotional state. Such persons are willing to undergo a physical illness or a permanent state of anxiety with physical symptoms rather than become reconciled to their lonely role of not being wanted or loved.

**Psychosomatic Pain**—A classic example of this mechanism is given by Freud: Rather than face the true fact of the frustration of her love life and the indifference of her fiancé, a young woman unconsciously preferred to suffer an excruciating pain in her arm. Many authorities believe that this observation of Freud marked the beginning of "psychosomatic medicine." Although this term was not used by him, the patient's condition

illustrated plainly the effect of the emotions on the body. This emotional effect produced a pattern of reaction wherein physical pain was more acceptable than facing the original (mental) pain of not being loved.

**Intensification of Nervous Reactions**—The ability to face pain uncompromisingly is so rare as to be almost nonexistent. What it primarily requires is emotional maturity. Emotionally, many persons are children still clinging to childhood patterns of dependency for security. A man can be an intellectual giant and yet his emotional life may still be infantile. The study of great men in the setting of their private lives bares many such cases.

No man is a hero to his dentist. He can grit his teeth, he can smile a fixed smile and grasp the arms of the chair with a tremendous force to conceal his great apprehension. But symptoms appear that belie his expression: increased sweating, flushing, increased pulse rate, increased blood pressure, dilation of the pupils, and increased pilomotor response (so-called goose flesh). All are indicative of an anxiety state and show that there are changes going on in the physiology of the sympathetic nervous system. A mature person thus may be exhibiting in the dental chair a physical pattern of apprehension caused by his subconscious association of the dental situation with some earlier and more painful experience, perhaps a childhood one.

**A Cause of Difficulties**—Because its nature is not understood, the pattern of apprehension becomes fixed. Such a reaction pattern gives rise to difficulties.



1. Needless discomfort. To most people, the dental chair means pain and tense nerves—an unhappy time to be postponed as long as possible.

2. Waste of energy. To the actual difficulty of the ordeal is added the cost in energy of this state of apprehension. In the case of patients who come for dental care after the ravages of a long illness, this extra toll becomes a serious drain on already low stores of energy.

3. Futile professional attention. A psychiatric patient may be escorted by his psychiatrist, a cardiac patient by his physician, a chronic invalid by his nurse, for dental care that is imperative. Despite such escort, however, the patients' apprehension and anxiety make proper treatment difficult.

### **Growth of Insight Into Suffering**

*In Dentistry*—Until now, dentists by and large have not realized fully enough that their care should go further than the mouth, that it should encompass not only the whole body but also the emotions. We are more than mechanical technicians; we deal with more than mouths: We deal with human beings. One cannot treat the condition and avoid the patient. One cannot tell him breezily, "Don't be afraid," when his whole body is suffering with anxiety, when his pulse, respiration, color, and physical reactions present the acute picture of apprehension despite his will to be brave.

A paragraph from a letter sent to me by a physician illustrates very well the anxiety situation in dentistry: "The expression, 'Pain is a friend of the doctor; it sends patients to his office,' implies that one goes to his physician to get rid of his pain. On the other hand, the expression, 'painless dentistry,' is usually considered as being ironical, meaning that 'there is no such thing.' The very thought of a dental appointment conjures up in one's mind the uneasiness of scraping, the discomfort of drilling and, above all, the horror of extraction."

*In Medicine*—For an entire century medicine has been moving toward a new kind of understanding of

the patient's suffering. It no longer takes for granted that pain is unavoidable and has to be borne. This concept has grown in medicine to the point where the patient's emotions are considered; dentistry, on the other hand, has not kept pace with it quite so closely. Dentists have, somehow been unaware of the suffering that comes from apprehension and anxiety. It is gratifying to see that all the professions are now so vitally interested in this subject.

### **Solving the Problem**

What can dentists do to solve the problem of apprehension and anxiety?

1. Stop this negative thinking about dentists.

2. Accept the fact that apprehensions and anxieties do exist.

3. Recognize the need for understanding patients' emotions and anxieties.

4. Develop a better understanding of patients' emotions and anxieties.

5. Attack the anxiety problem intelligently instead of merely thinking about it.

6. Treat patients with a feeling of dignity and good fellowship.

7. Develop a feeling of security in worried patients, by convincing them that their apprehensions and anxieties are needless.

8. Honestly face this whole situation of apprehension and anxiety.

9. Develop and maintain a friendly relationship between the patient and the dentist.

10. Realize the importance of preoperative medication.

*Preoperative Medication*—The importance of preparing nervous and apprehensive patients for dental operations is often not appreciated to its fullest extent. While it is not necessary to premedicate patients routinely, there are times when preoperative sedation is of great value. In cases where patients have excessive anxiety about dental operations, preoperative sedation will do much to make them more comfortable and more cooperative.

Precautions: 1. It is important, when drugs are being used for this purpose, that their effects have large-

ly worn off before the patient is dismissed.

2. It is also essential that before the dentist begins to use new drugs, alone or in combination with other preparations, he become acquainted with each drug and learn what it will do.

A Method for the Dental Office: A description of the medicaments (monocaine hydrochloride [1.5 per cent with epinephrine 1:100,000] and demerol hydrochloride); the armamentarium, and the method I use, as it is given in my first paper,<sup>1</sup> will be presented next month.

The most important factor in the reaction achieved is the speed with which this combination of medicaments works. When monocaine hydrochloride with demerol hydrochloride is used, the elevation of the pain threshold is less important, for local injection anesthesia has taken care of the operative area. Changing the attitude of the patient toward the operation is the source of interest in this method. It is achieved by changing the *reaction threshold* through the *central action* of demerol hydrochloride.

One patient treated with monocaine hydrochloride in combination with demerol hydrochloride expressed his reaction thus: "It is almost comparable to the pleasant relaxation one experiences after a few drinks. There was no shock sensation, merely a generalized physical inertia. I feel a little sleepy, but in a state of readiness for whatever is to happen to me. I experience an immediate reaction of cooperation with my doctor in contrast to the tense hypersensitive state in which I found myself in the past."

*The Ultimate Solution*—We must not be contented *only* with anesthetizing the operative area by the injection of local anesthetics; we must also take into consideration this circumstance: If any of the emotions are sufficiently affected by anxious anticipation, we must recognize this behavior *as part of the operation itself* and include premedication along with the use of local injection anesthesia. 29 Commonwealth Avenue.

<sup>1</sup>Copen, S. Irving: Premedication by Co-medication in Local Anesthesia, *Am. J. Orthodont. & Oral Surg.* 33:290-300 (April) 1947.

## **Anomalies of the Anterior Region of the MANDIBLE\***

GEORGE A. MORGAN, D.D.S., Toronto

### **DIGEST**

*Differential diagnosis of anomalies of the anterior portion of the mandible is important, for pathologic areas of bone radiolucency are frequently seen in this region. One must be able to differentiate between a cementoma, a radicular cyst, a cyst of traumatic origin, areas of sclerotic bone, and such periapical conditions of a pathologic nature as a granuloma or a diffused infiltrating abscess.*

*Differential diagnosis in this region is dependent on (1) intelligent roentgenographic interpretation of good roentgenograms; (2) an accurate clinical history of the teeth involved; (3) keen observation of the color and the position of the teeth in the anterior region, and (4) an accurate vitality test.*

### **Cementoma**

The cementoma is a tumor type of dental anomaly which has not been generally recognized. According to Stafne of the Mayo Clinic, the incidence is at least two per thousand persons.

**Characteristics**—1. This form of odontome is of connective tissue origin and is attached to the apex of a tooth.

2. It does not contain any dental structures, other than cementum.

\*This is the last in a series of three articles by Doctor Morgan on problems in differential oral and dental diagnosis.

**Clinical Picture**—1. A cementoma may be observed around one anterior tooth or all four anterior teeth may have cementomas attached to the apexes.

2. The dental history of pain or trauma will be negative; a positive vitality test will be registered, and the color and position of the teeth in the area will be normal.

3. Bone radiolucency will vary according to the stage of growth during which the odontome is observed:

a) In the primary stage (Fig. 1), it will be difficult to differentiate between a cementoma and a granuloma, due to the similarity in degree of radiolucency.

b) In the later stages, when ce-

mentum begins to be deposited in the area, the radiolucency will become more opaque and therefore can be easily distinguished (Fig. 2) from that of a granuloma.

### **Periapical Lesion**

The clinical picture of an infected periapical lesion will be in contrast to that of a cementoma: The patient will give, in most instances, some history of trauma or pain; the tooth or affected teeth will likely shade off from normal color and react negatively to a vitality test; frequently, a portion of the enamel will have been splintered or fractured away by traumatic injury. (It is well to remember that the splintered tooth is likely vital; the adjacent tooth or teeth that have taken the full blow and have not

**1. Cementomas, primary stage, involving four anterior mandibular teeth. Teeth are vital and normal as to color, no history of trauma, no pain.**



**2. Cementomas, late stage, involving four anterior mandibular teeth. Teeth are vital and normal as to color, no history of trauma, no pain. Note filling in of cementicles in contrast to Figure 1.**





**3. Dumbbell-shaped pathologic area involving mandibular central incisors. Teeth do not respond normally to vitality tests and are not normal in color. Note resorption of root structure.**



**4. Twin cystic areas in the mandibular anterior region. Teeth test vital; normal as to color; no history of pain; no swelling. History of previous cyst removal. Cysts believed to be traumatic in origin and not involving tooth structure. Note bone structure between root apices and cystic wall.**



**5. Diffuse abscessed area in anterior mandibular region. Left lateral tooth nonvital (to ice). Remaining teeth normal in color; some degree of swelling.**

fractured, however, will likely be found to be negative to a vitality test and off-shade as to color [Fig. 3]).

### Cystic Conditions

1. Cystic conditions can generally be differentiated by their definite outline.

2. Many teeth, otherwise extracted, will be saved if the principle is followed of removing the cyst first and then, if necessary, the tooth involved in the cyst.

3. Cysts in the anterior region may be of traumatic origin and therefore have no direct connection with the anterior teeth.

4. A positive vitality test of teeth

involving radicular cysts, which contain a sizable amount of fluid, will be secured frequently.

5. Cystic conditions do not always cause a color shade change of all the teeth involved (Fig. 4).

### Other Radiolucent Areas

*Diffuse abscessed areas* may frequently be observed in the anterior region. Here, again, it is wise to remove the abscessed area, first, and only if necessary, the teeth involved, second. It is important to remember that extractions should *not* be at-

tempted while these cases are in an acute stage (Fig. 5).

*Areas of sclerotic bone* are differentiated from cementomas and pathologic areas or root structure by a variation in radiolucency.

*Hypercementosis* of teeth in the anterior, mandibular region is rare. The area of hypercementosis involves chiefly the root structure of the tooth above the apex whereas the cementoma or pathologic area is observed below the apex of the tooth. A diagnostic point to remember is that in hypercementosis the periodontal membrane remains intact and can be easily traced around the area.

170 St. George Street.

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## ***The GOLD and ACRYLIC Fixed Bridge: Essential Architectural Features***

**I. FRANKLIN MILLER, M.A., D.D.S., Pittsburgh**

### **DIGEST**

**1. Jacket crowns afford a stronger foundation for bridges than gold inlays or three-quarter crowns.**

**2. Soldered mechanical joints join pontics to their abutments more strongly than do contact surfaces of these teeth soldered to each other.**

**3. All masticatory surfaces of acrylic pontics, including the occlusal edges, must be protected by hard alloyed gold.**

**4. A marginal bezel on the gold jacket housing the acrylic veneer or pontic increases retention.**

MANY OF us have condemned the use of acrylic resin for fixed bridges because of its relatively limited capacity to resist abrasion. On the other hand, some have welcomed this quality, believing that the attrition of occlusal surfaces establishes a natural occlusal balance that is unobtainable by any other means. Both of these points of view overlook the essentials of the architecture of a gold and acrylic fixed bridge:

1. All surfaces exposed to mastication must be cast in a hard alloyed gold.

2. The acrylic should be confined to surfaces where its esthetic superiority can be fully utilized and its acceptability to the soft tissues exploited; that is, to labial or buccal veneers

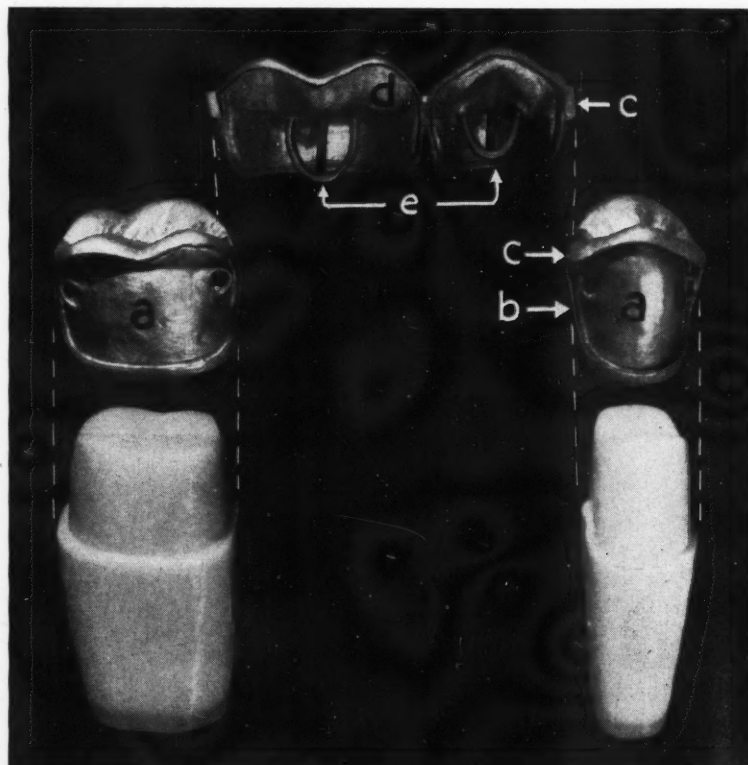
and to the mucosal surfaces of the bridge pontics.

(The fallacy that masticatory attrition will result in a natural balance should be obvious to anyone. Such attrition actually results in the extrusion of the opposing teeth, then further abrasion, further extrusion and, finally, occlusal unbalance.)

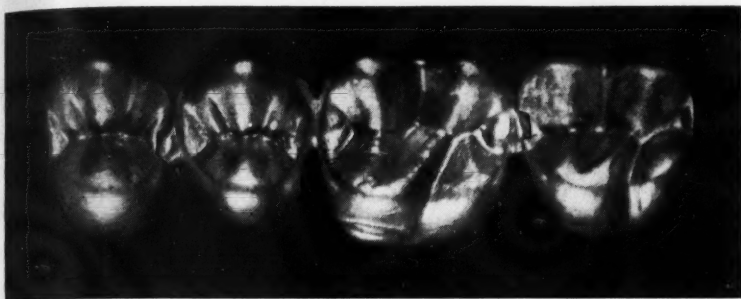
### **Fixed Bridge Architecture**

Bearing these requirements in mind, consider the important architectural features of this type of restoration. Two features that should be common to all fixed bridges, whether acrylic is or is not used in their construction, are jacket crowns and soldered mechanical joints (Figs. 1, 2, and 3).

*Jacket Crowns*—It will be noted



**1. (a) Gold jackets with provision for acrylic veneers. (b) Bezel for proper mechanical retention of acrylic and to prevent "popping" and discoloration. (c) Mechanical lug and slot joint. (d) Pontics with gold occlusal and lingual surfaces. (e) Basket effect for mechanical retention of acrylic.**



**2.** Occlusal view; gold masticating surface. Lug and slot dovetail to form mechanical soldered joint.

that the abutments are jacket crowns. Clinical observation has shown that (1) cast gold veneer crowns on abutments afford the strongest foundation for bridges and that (2) within jacket crowns abutment teeth are immune to the recurrence of decay, being sheathed completely to a point beyond their gingival margins. (These remarks, however, do not imply any general condemnation of the gold inlay or three-quarter crown.)

**Mechanical Joints**—It is recommended that a soldered mechanical joint be used rather than soldered surfaces where the connection is a fixed one (Fig. 2). This mechanical joint, it will be noted, consists of a tapered, dovetail slot, formed in the connecting proximal surface of the abutment, into which a dovetail lug fits. The lug is formed when the gold pontic is cast.

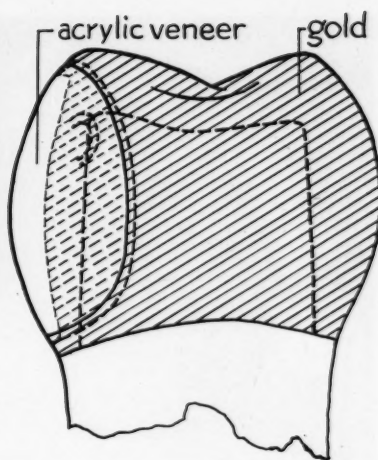
**5.** Anterior mandibular teeth prepared for abutments (lateral incisors and cuspids) and jacket crowns (central incisors).



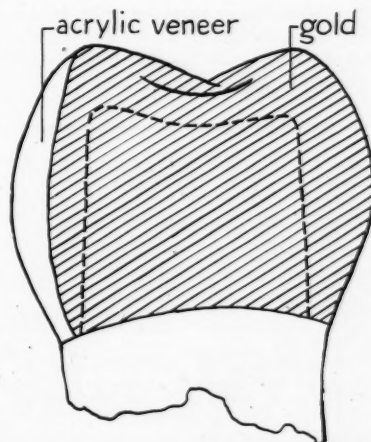
This device is similar to that employed by many dentists for their "loose end joints." The difference is that the dovetail lug and the encompassing slot are soldered together. The amount of solder used is just enough to unite the closely fitting surfaces of the lug and the slot. This provides a stronger connection than that wherein the contact surfaces of the abutment and the pontic are soldered to each other. Mechanical joints also preclude the risk of injuring the margins of the castings when excess solder has to be dressed away.

**Gold Coverage**—The casting gold of the pontics affords full protection to the occlusal edges of the acrylic. On the lingual surfaces of the acrylic the gold should extend two-thirds of the distance from the occlusal edges to the alveolar ridge.

On the other hand, the gold proximal surfaces of the abutment veneers can be and should be invisible from a labial or buccal point of view—an architectural feature that is diffi-

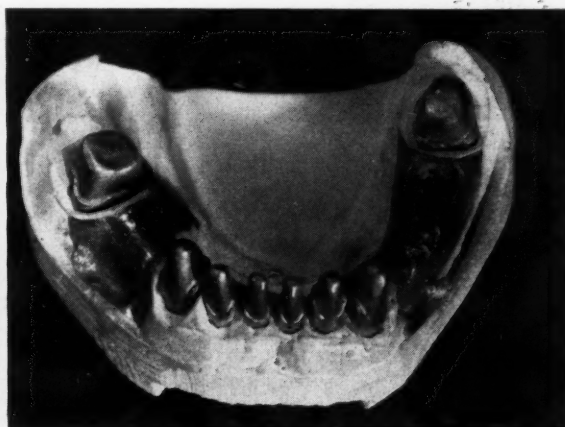


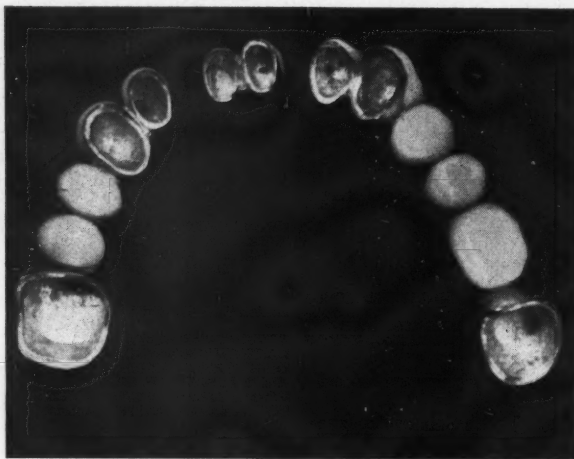
**3.** Bezel frame is recommended.



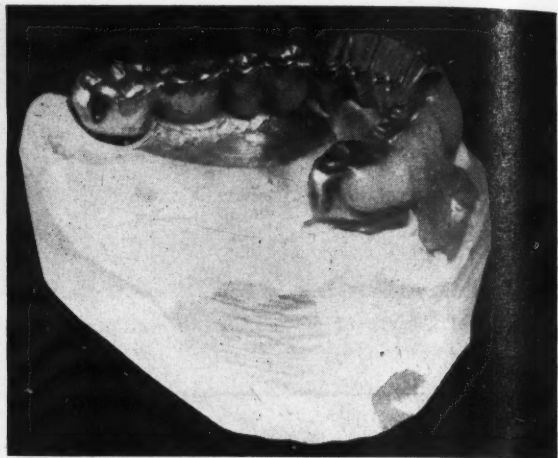
**4.** Design to be avoided—a beveled margin.

**6.** Working model of the abutment and the incisors with electroplated dies in place.





**7.** Undersurfaces of the jacket crown abutments, the bridge pontics, and the incisor gold and acrylic veneer crowns. Note that the support of each bridge has been strengthened by soldering the cuspid abutments to the gold jacket crowns on the lateral incisors.



**8.** Finished bridges and incisor jacket crowns in position on the working model.

cult if not impossible with porcelain veneers.

**Increased Retention**—1. Retention for the acrylic veneers and pontics is partly provided for by loops or wings cast from small gauge sprue wax (Fig. 1).

2. Retention is also increased by creating a *bezel* around the entire

margin of the gold "housing" in which each acrylic veneer or pontic is contained. (*Bezel* is the term applied by jewelers to the rim extension which encircles and holds a gem in its setting or the groove in which the glass of a watch is fitted.)

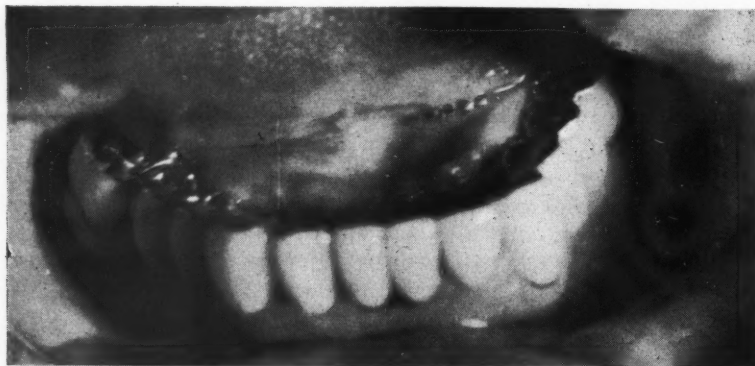
### Faulty Architecture

**Beveled Margin**—Many dentists use a *beveled* margin for the rim of the gold "housing" in which the acrylic is contained. This margin does not provide the added retention that the *bezel* margin does. An even more important disadvantage of the *bevel* margin is that a seepage of saliva be-

tween the gold and the acrylic is almost inevitable, accompanied by discoloration and even separation of the edges of the acrylic from the gold. A *bezel* margin positively precludes these consequences; the acrylic is tightly sealed. (The difference between a *bevel* and a *bezel* is shown in Figures 3 and 4.)

**No Gold Extension Beyond Gingiva** Another (and greater) error is illustrated in Figure 3. Often the acrylic veneer is extended beyond the gingival margin on the labial surface of the crown while no protection is provided for the occlusal edge. Both of these defects increase the risk of saliva seepage between and separation of the acrylic veneer and the gold casting. The gold casting must be extended beyond the gingival margin all around the tooth (Fig. 3) to seal it completely; also, it must be provided with a *bezel* gold rim for adequate protection of the occlusal edge and for retention.

412 Medical Arts Building.



**9.** Finished bridges and incisor veneer crowns in position in the lower arch.



## Observation of Oral Symptoms

### of MONOCYTIC LEUKEMIA: A Case Report

ROBERT A. ATTERBURY, B.S., D.D.S., Chicago

#### DIGEST

*Exemplified by this case is the dentist's need to consider that a pathologic condition in the mouth may be an oral manifestation of a systemic disease.*

*Extremely hypertrophic gingival tissue—soft, spongy, and bleeding—as well as pseudomembranous lesions of the mouth and throat caused the patient to seek dental treatment. Had her other complaints (especially excessive skin bruising, petechiae, and nocturnal accumulations of sanguineous sputum) not been regarded as significant, a futile course of treatment for gingival bleeding might have been undertaken while the patient suffered from an acute leukemia.*

ORAL manifestations are frequently the first symptoms of leukemia. Because of the progressive character of the gingival lesions in the disease, a person with leukemia usually seeks dental treatment. It is therefore imperative that the dentist recognize leukemic cases as early as possible; there is a slight chance that some patients may recover<sup>1</sup> if treated promptly.

The oral lesions in leukemia are confined mainly to the gingival tissues and mucous membranes. The commonest lesion is spontaneous bleeding from pale and anemic gingi-

val tissues on slight trauma. Leukemia cells soon infiltrate the gingival tissues which become bright red, swollen, edematous, and painful; and bleed easily. At times the swelling is so extreme that the gingivae covers the teeth.

Leukemia should be suspected especially if pallor develops suddenly, the skin bruises easily, and blood spots appear in the skin. The blood picture and physical findings will verify these suspicions, if the disease is present. Differential diagnosis must rule out other gingival affections such as those found in epilepsy, agranulocytosis, mononucleosis, thrombocytopenia, purpura, aplastic anemia, scurvy, hemophilia, severe sepsis, drug reactions, noma, and severe fusospirochetosis.<sup>2</sup>

#### History of Symptoms

**Oral Lesions**—A young woman, aged 25, presented with bleeding, tender gingivae, loosening of the teeth, and pseudomembranous lesions on the membranes of the mouth and throat. The gingival tissue was extremely hypertrophic, soft, and spongy. It bled to the touch. These oral conditions had been present for several months.

**Headaches and Nausea**—The young woman had also experienced dizziness and generalized headaches over the orbital, frontal, and occipital areas along with nausea and vomiting for several months preceding her visit. She had several bruises and

several areas of petechial hemorrhages on her arms and stated that she had always bruised easily.

**Bruises and Petechiae**—The patient recalled that eight months before (when her first baby was three months old), she had begun to feel tired and wanted to sleep longer than usual. The gingivae became so sore that they bled on eating and brushing. Later, it became a nightly occurrence to awaken and expectorate a mouthful of bloody sputum. For two months previous to her visit, she had noticed that she bruised with less provocation than usual. The black-and-blue marks remained there for some time. She first noticed the petechial hemorrhages on the inner aspect of her arms and legs a month before she came to see me. While helping her husband pack for a vacation, a week before she came in, she noticed a rushing sound in her ears and felt faint every time she bent over.

Because of this history, leukemia was suspected and the patient referred to a physician for verification of the diagnosis. After a differential blood count and a sternal marrow puncture, the patient was admitted to a hospital on June 9, 1947.

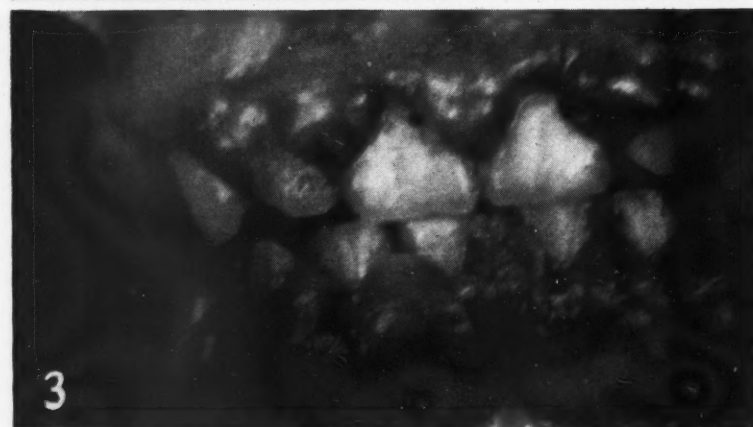
#### Hospital Examination

**Clinical**—Her skin was pale and covered with numerous pin-point and pin-head-sized petechiae. There were several bruised areas. Hemorrhages were present in both fundi and in both ear canals. The nasal passages were clear of hemorrhages.

The gingival tissues were markedly hypertrophied and bled from several elongated interdental papillae (Figs. 1, 2, and 3). On the borders of the

<sup>1</sup>McCarthy, F. P., and Karcher, P. H.: Oral Lesions of Monocytic Leukemia, *New England J. Med.* 234: 787-790 (June 13) 1946.

<sup>2</sup>Fitzgerald, L. M.: Oral Lesions in the Leukemias, *J. Iowa M. Soc.* 33:424-426 (September) 1943.



**1, 2, and 3.** Acute monocytic leukemia. Note marked swelling, congestion, and infiltration of the gingival tissues.

papillae was a superficial grayish slough, simulating an acute Vincent's gingival infection. The teeth showed evidence of movement. Otherwise they appeared to be in good condition with the exception of the lower right second molar and the lower left first molar. These teeth had extensive

caries and intra-oral roentgenograms indicated that pathologic involvement of the apexes was probable. The mouth and throat oral membranes showed a generalized reddening with pseudomembranous lesions.

The cervical lymph nodes were moderately enlarged and tender on

palpation, especially in the submental and submaxillary areas. Lymph nodes were also palpable in the axilla and groin.

**Laboratory**—Oral smears indicated that Vincent's spirochetes and fusiform bacilli predominated over other bacterial flora. (Some investigators believe that the Vincent's flora plays no essential role but secondarily contribute to the destruction of tissue.)

Laboratory blood examination<sup>3</sup> revealed the following data:

1. Wassermann, negative; Kahn, negative.
2. White blood count: 60,000.
3. Red blood count: 1.5 to 2.0 million per cubic centimeter.
4. Neutrophils, 5 per cent; monocytes, 0; lymphocytes (large), 95 per cent; basophils, 0. (The normal range of lymphocytes is from 25 to 35 per cent.)
5. Hemoglobin, 4.5 grams per 100 cubic centimeters (normal range is from 14 to 17 grams).

### **Treatment Plan**

A tentative diagnosis of monocytic leukemia was made and the following treatment planned:

1. Transfusions, as often as necessary.
2. Ethyl carbamate, 1 gram B.I.D.
3. Urethane syrup, 4 cubic centimeters B.I.D.
4. Vitamin K, 1 milligram daily; rutin, 20 milligrams T.I.D.; Vitamin C, 200 milligrams T.I.D.
5. Special diet: 2700 calories. Diet high in protein and carbohydrate.
6. Penicillin, 100,000 units every three hours around the clock.
7. Periodic determination of leukocyte count.
8. Gentle cleansing of the mouth T.I.D. with hydrogen peroxide on applicators.
9. Petrolatum smeared on the lips.
10. General palliative oral care.

### **Course of Illness**

**End of Four Weeks**—After about four weeks of treatment, the patient showed little sign of improvement. There was still a rather profuse

<sup>3</sup>Laboratory Diagnostic Data of Interest to Dentists, DENTAL DIGEST 54:65-67 (February) 1948, gives normal values for blood constituents.

amount of bleeding from the gingivae which had not decreased in size; there was a conjunctival hemorrhage in the right eye and the skin over the body was covered with tiny petechial hemorrhages; there appeared to be a progressive involvement of the oral tissues despite local and constitutional treatment, including multiple blood transfusions and Urethane administration. (Urethane has been used mainly in the treatment of leukemias and in some cancers. It affects the blood cells chiefly and causes the involved tissues to shrink. The substance is not perfected and side reactions are frequent.)

The white blood count decreased from 60,000 to 35,000. The special diet was continued because the patient had difficulty in masticating. Transfusions were also continued at intervals but, nevertheless, the red blood count continued to hover between 1.5 and 2.0 million per cubic centimeter.

*End of Seven Weeks*—Seven weeks after admission, the leucocyte count began to rise, associated with a steady increase in temperature and many multiple hemorrhages. Two days later the patient was considered moribund and was placed on the critical list.

*Week Before Death*—The voice was hoarse, vision blurred, and hearing difficult. The patient was unable to retain food. She appeared to be moribund but responded to questions. The gingivae were bleeding in several areas. The floor of the mouth was partly filled with vascular necrotic gingival tissue which raised the tongue and held the mouth open. The temperature continued around 105.4. There were submucosal ulcerated hemorrhages in the tonsillar areas.

Fresh blood transfusions, the use of an oxygen tent, administration of

penicillin, and general palliative care were continued. Oral care consisted of gentle cleansing of the mouth with hydrogen peroxide to soften and remove inspissated blood, mucous, detritus, and exudates. To keep the patient comfortable, petrolatum was smeared on the lips to keep them soft and the nose was wiped gently.

Two days before death the patient lay in an oxygen tent, extremely pale and without motion, breathing rapidly through the mouth. Dried blood was seen on her lips and tongue and bright orange froth appeared at her nostrils. She did not speak. The buccal mucosa was very pale with generalized petechial and purpuric submucosal hemorrhages. The facial skin had similar hemorrhagic lesions. There was old and new bleeding from the gingival margins; the tongue was dry and covered with dry blood; there were ulcerations of both tonsillar regions and of the posterior pharyngeal wall which seemed to extend up to the nasopharynx. The nasal membranes were pale and the turbinates swollen.

In a final diagnosis of monocytic leukemia, the submucosal hemorrhages of the nose, mouth, nasopharynx, and pharynx, with ulceration of the nasopharynx, pharynx, tonsillar areas, and gingivae, were considered to be secondary symptoms.

Inasmuch as the patient was obviously dying, any procedure that might have caused her discomfort was dispensed with. Only general palliative and supportive measures were employed.

### Comments

*Etiology*—The cause of leukemia is still unknown. Although bacterial and virus infections have been suspected,

they have not been proved to be initial factors. Heredity bears no relation to the disease. There is no doubt that roentgen rays and such radioactive substances as thorium and mesothorium can produce the disease; but the initial cause is still unknown.<sup>4</sup>

*Treatment*—Treatment of the acute case of leukemia is usually unsatisfactory; the illness runs a fatal course. Effective treatment is limited to general palliative and supportive measures, periodic blood transfusions, and symptomatic therapy. In addition to supportive and symptomatic measures, roentgen ray irradiation and, more recently, radioactive phosphorus have been found of value. (This substance, however, is difficult to obtain and the cost is often prohibitive.) Much of the profound oral sepsis can be prevented by appropriate doses of penicillin, for the invading bacteria are sensitive to this antibiotic. Penicillin has the advantage over the sulfonamides that it does not affect the bone marrow.

### Conclusion

Dentists should not regard the oral cavity as an entity but should consider that it frequently reflects systemic disorders.

The case reported serves to emphasize that prognosis should be guarded when the dentist is confronted with an apparently benign bleeding or gingivitis, sudden enlargement of the gingiva, or sudden loosening of a tooth or teeth. These symptoms may well be the first oral signs of acute leukemia. Especially does this apply if a patient has fever, pallor, skin bruises, and dependent edema.  
55 East Washington Street.

<sup>4</sup>Dameshek, William: Leukemia, *Hygeia* 24:908-909 (December) 1946.



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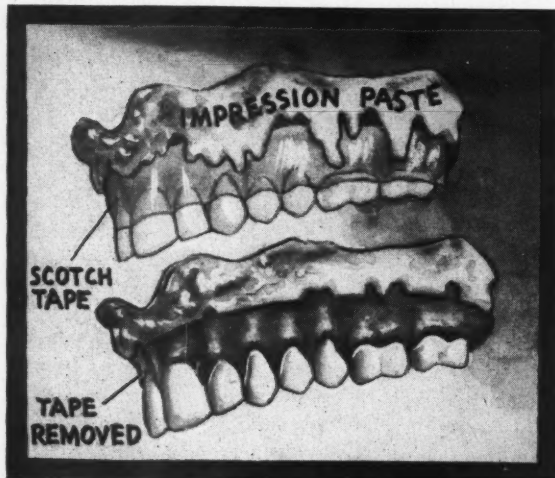


## Polishing the Inside of Clasps

Joseph Rizzi, Brooklyn

1. To obtain a high luster on the inside of clasps, wrap a piece of steel wool on the end of a bur. Steel wool will shine gold without removing metal. This method ensures a polished clasp surface in contact with the tooth.

2

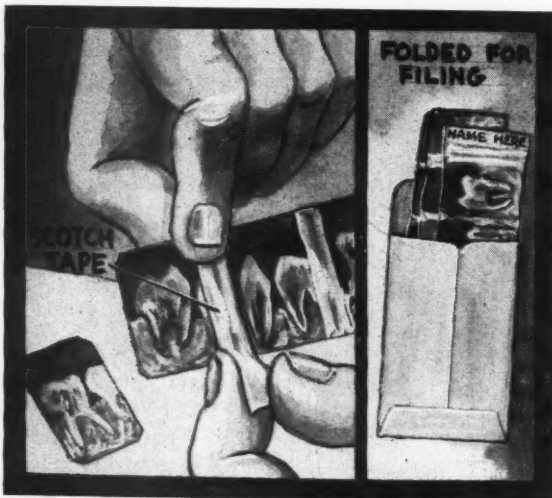


## Precautionary Measure in Relining Dentures

Walter Spivack, D.D.S., Philadelphia

2. When the old denture is used as an impression tray for a reline, the impression paste may be prevented from adhering to the buccal, lingual, and labial surfaces of the denture and teeth by applying a strip of cellulose tape  $\frac{3}{8}$ -inch wide to these surfaces. After the impression has been made, the strip may be peeled from the denture.

3



## Mounting Film For Filing

C. W. Konigsberg, D.D.S., Oakland, California

3. Individual x-ray films are placed emulsion side down in their proper order. A piece of transparent scotch tape is attached along the upper or lower border or along the sides. The tape connects the individual films of the upper or lower teeth. The typed name and date are enclosed in the tape and attached where they do not interfere with the view.

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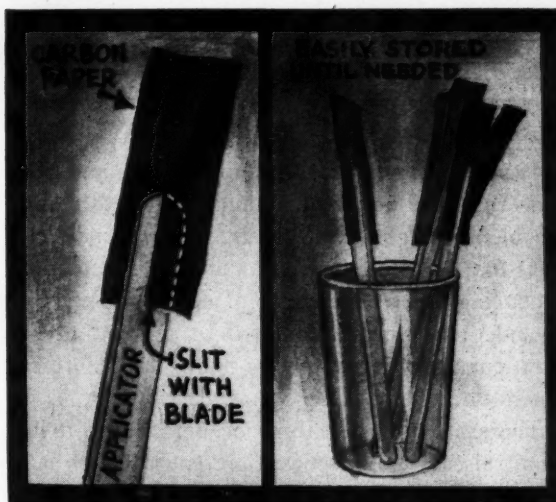
You do not have to write an article. Furnish us with rough drawings or sketches, from which we will make

## SUGGESTIONS . . .

### A Clean and Convenient Method of Using Carbon Paper

George M. Witter, D.M.D., Spokane

4. Carbon paper is cut in the desired lengths. A slit is made with a razor blade in an applicator stick. A piece of carbon paper is inserted in the slit. After use, these sticks may be placed in an autoclave for sterilizing before re-use.

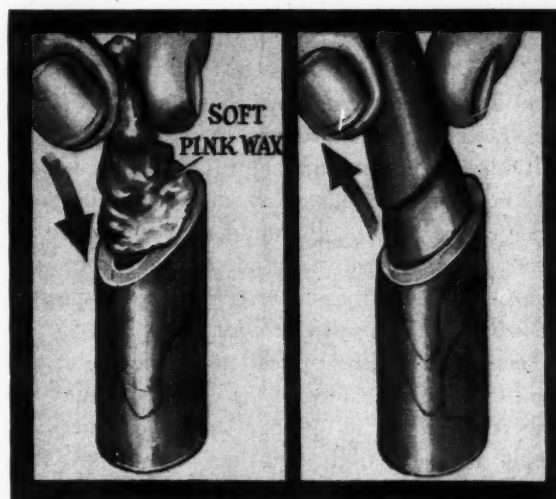


4

### Cast Metal Die for Jacket Crown Construction

F. Engel, L.D.S., Bournemouth, England

5. Amalgam or cement dies of slender preparations are apt to break easily. A cast metal die has greater strength. Such a die may be made by softening wax and carefully pressing it into the modeling compound impression. The pattern made should be as accurate as one for an inlay. It should reach to the incisal edge and should show a clean reproduction of the shoulder preparation. The casting is made in silver.

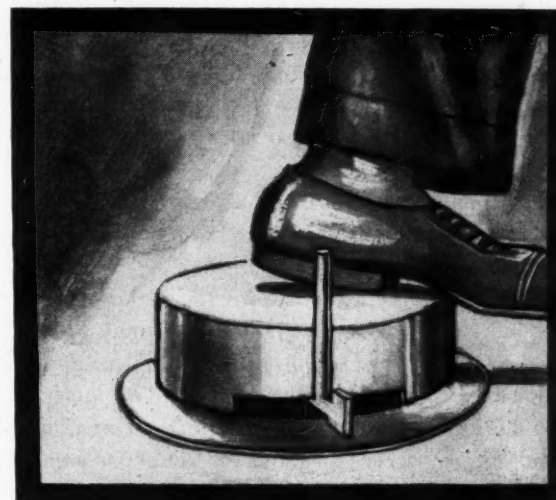


5

### An Engine Foot Control Device

Lonas W. Heim, D.D.S., Taylorville, Illinois

6. Drill a 3/16-inch hole in the foot control arm and tap it for a quarter-inch bolt. Insert a standard quarter-inch bolt and cut off one inch above the top of the control. This vertical upright will permit the dentist to place his foot on top of the control and operate the dental engine with his heel. This is of particular help when the dentist is using an operating stool.



6

suitable illustrations; write a brief description of the technique involved; and jot down the advantages of the technique. This shouldn't take ten minutes of your time.

Turn to page 280 for a convenient form to use.

Send your ideas to: Clinical and Laboratory Suggestions Editor, DENTAL DIGEST, 708 Church Street, Evanston, Illinois.

## The EDITOR'S Page

DENTAL PATIENTS are beginning to ask questions concerning the power of sodium fluoride to reduce the incidence of dental caries. The evidence suggests that sodium fluoride is a chemical method of producing a part immunity to dental caries. The fluoride ion, whether ingested or applied to the tooth enamel directly, makes the enamel more resistant to acid attack.

The exact nature of this mechanism of part immunity is not understood at present although it is known that the addition of fluorine is effective only during the period of tooth formation. Children who have ingested fluorine from their water or food supplies in a sufficient amount or who have received at least four topical applications of a 2 per cent solution of sodium fluoride have shown a reduction in caries rate as much as 40 per cent.

It must be emphasized that this chemical method does not *prevent* tooth decay; it *reduces* the incidence of the disease. It should not be referred to strictly as a preventive or immunizing procedure because it is actually neither. This is not a specific procedure but a supportive one.

The public health implications in the use of sodium fluoride are many. If the caries rate may be reduced as much as 40 per cent, the American people will be spared pain, time, and money. Because it is a public health problem, dentists must be prepared to sponsor programs that will make the advantages available to all children. Dentists have been the ones who have made the observations and conducted the basic research on the relationship between fluorine and dental caries; dentists have demonstrated their social awareness by presenting this discovery to society.

From a public health aspect there are two methods of supplying the fluoride ion to the teeth of children during the formative years. Fluorine may be added to the communal water supply in the protective amounts of one part per million or it may be applied to the teeth of children by the topical application of a 2 per cent solution of sodium fluoride. The addition of sodium fluoride to the communal water supply is cheap (about ten cents per capita per year); it includes all children in the com-

munity; it does not require the expenditure of time by dentists, hygienists, or children. At the present time there are fewer than a dozen communities in the United States where the chemical is being added to the water supply.

There is no time-lag or delay in using the chemical by topical application. Every dentist can start this treatment at once. There is, however, an educational job that must be done first to acquaint the public with the advantages and limitations of the procedure. The evidence suggests that one application locally gives a 4.9 per cent reduction in the caries rate; two applications, a 10 per cent reduction; three, a 20 per cent reduction; four, a 40 per cent reduction. Four treatments are therefore the minimum indicated to give any effective result. The cost of four such treatments by a dentist would probably be \$10 to \$15.

Realism requires us to recognize that only a minority of children would receive the advantages of these treatments. Parental ignorance, indifference, and indisposition to spend money for treatment of a semipreventive nature are factors that must be considered.

We must expect public health workers to insist that all children under fifteen be given the opportunity to receive treatment just as they now receive immunization and vaccine for the communicable diseases. Such preventive programs are usually carried out in the schools under the supervision of health departments with funds from public sources. We may expect the demand for sodium fluoride treatment to follow this same pattern.

Do we have the professional personnel to undertake such a vast public health program? If we do not, what will our attitude be when the suggestion is made that non-dentists give the topical applications to children in the schools? The dental profession has done a magnificent job in fundamental research on the subject of sodium fluoride in caries control.

The public will watch with interest to see if we have an attitude of social enlightenment when discussions begin on methods of making treatment available to all children.





## ACS in Arthritis

In 1942 the representatives of the Academy of Sciences of the Ukrainian Soviet Socialist Republic passed a resolution that the therapeutic effect of the Bogomolets antireticular cytotoxic serum (ACS) was clearly established in the treatment of rheumatism. Their basic concept of rheumatic disease is that it is an allergic process involving active mesenchymal tissue. And for this, ACS is indicated to restore the normal reactivity of connective tissue cells.

Because of such favorable Russian reports on the value of the serum, it was decided by an American group that further definition of its value be obtained.

The serum was prepared in rabbits according to the method of Marchuk. The research was carried out in two parts: (1) observations of the effect of ACS as a prophylactic and therapeutic agent against pleuropneumonia-induced arthritis and (2) clinical observation of ACS used to treat rheumatic disease, especially chronic arthritis.

Many tests revealed that ACS was of no value either in preventing arthritis caused by pleuropneumonia-like organisms or as a therapeutic agent against the effects of pleuropneumonia infection.

Clinical observation was made on patients manifesting different stages of activity of rheumatoid arthritis and spondylitis. Patients were carefully noted for changes in symptoms and physical signs over a period of time. An effort was made to determine the alleged stimulation of the connective tissue. This was done by injection of trypan blue intradermally. The widespread dispersion of the dye had been considered a dependable index of the activity of the connective tissue. No such results were obtained by the American group; in fact, the test was so disappointing that it was abandoned.

Changes in the blood morphology and a decrease in the erythrocyte sedimentation rate were suggested as indexes of activity of the connective tis-

# MEDICINE

## and the Biologic Sciences



sue. Following each course of injections there was little change in blood morphology. There was a variable change in sedimentation rate which returned to former readings in a short period of time.

Studies indicated that benefits were mainly subjective and in many cases relapses occurred after a short time.

Rogoff, Bernard; Freyberg, R. H.; Powell, H. M., and Rice, R. M.: *Experiences with Antireticular Cytotoxic Serum (ACS) in Arthritis*, *Am. J. M. Sc.* 214:395-400 (October) 1947.



## Tonsillectomy and Poliomyelitis

In recent years many observers have suspected that there was a definite relationship between tonsillectomy and the incidence of poliomyelitis. To learn more about this suspected relationship the American Laryngological, Rhinological and Otological Society at its meeting in May of 1946 decided to conduct a nationwide survey. Of 6,000 questionnaires received nearly 4,000 had to

be discarded because they were too sketchy or incomplete.

Even though the study was not designed to settle conclusively the problem of whether surgeons should avoid removing tonsils during epidemics of poliomyelitis, some valuable information was gained. Tonsillectomies preceded 4.7 per cent of the cases of bulbar involvement while only 1.9 per cent of the cases of spinal involvement followed recent tonsillectomies.

Tonsillectomies are performed usually in the summer months not entirely as a matter of convenience to the surgeons or the children. The summer months, with their low incidence of respiratory infections, offer the ideal time for such procedures. If the present practice of performing tonsillectomies during the summer is to be changed because of fear of poliomyelitis, then the dangers of respiratory infections will substantially increase. To risk that increased danger, laryngologists must have proper justification.

The majority of tonsillectomies are not elective. Most of them are necessary surgical procedures performed in the interest of preventive medicine. Infected tonsils are possible foci for nephritis, mastoiditis, infection of the middle ear, rheumatic fever, and many other debilitating diseases.

For the full protection of the patient the surgeon, before postponing an indicated tonsillectomy, must weigh the dangers and chances of the contraction of any of the above-mentioned diseases as well as the dangers and chances of poliomyelitis.

Cunning, D. S.: *Tonsillectomy and Poliomyelitis*, *Arch. Otolaryng.* 46: 575-577 (November) 1947.



## Tetralogy of Fallot

The syndrome known as the tetralogy of Fallot is the principal cause of congenital heart disease associated with cyanosis in children. Without surgery the outlook for these children is hopeless. Their life expectancy is approximately 12 years.

Blalock and Taussig pioneered in surgery for relief of this condition. Basically the Blalock technique consists in anastomosing the innominate artery to a pulmonary artery in children under two years of age. In older children the subclavian artery is anastomosed to either the right or left pulmonary artery. The object is to increase the blood flow to the lungs.

When the innominate artery is used, there arises the possibility of considerable danger and cerebral damage because the common carotid is sacrificed in the procedure. Use of the subclavian is comparatively safe as collateral circulation is sufficient to nourish the upper extremity.

In 1946 a new procedure was presented for bringing more blood to the lungs. This consists of anastomosing the aorta directly to either the left or right pulmonary artery depending upon the curve of the aortic arch. Special instruments were designed to allow a good portion of blood to flow through the aorta while at the same time the surgical operation was being completed. (This is necessary because complete occlusion of the aorta for more than a short time results in anemia of the spinal cord and consequent paralysis.)

There are four common features of the syndrome of Fallot: pulmonary stenosis, interventricular septal defect, dextroposition of the aorta, and hypertrophy of the right ventricle. Pulmonary stenosis is the most important. The degree of cyanosis in general is directly proportional to the severity of the stenosis.

Diagnosis of uncomplicated tetralogy of Fallot is not difficult. The child is cyanotic and has a red blood cell count usually of about seven or eight million. The child is partly or greatly incapacitated. The roentgenograph and the electrocardiogram verify the condition. The cases remediable by surgery require the utmost skill in diagnostic acumen on the part of cardiologists trained in the study of congenital heart disease.

In patients considered for surgery the finest preoperative care is given. Parents are told frankly that the operation is an exploratory procedure. Only after the chest is opened is it

possible to determine whether an anastomosis can be brought about. If the child has no pulmonary artery, no surgical relief is possible.

Anesthesia is administered carefully as the anoxic child has a very narrow margin of safety. The anesthetic agent of choice is cyclopropane because of the high percentage of oxygen that can be given with it.

Postoperative complications are not troublesome as a rule. If the child survives the operation and wakes up promptly following operation, the outlook is good. In a series of 36 children treated in one hospital the mortality was 11.1 per cent. Occasionally there are no pulmonary arteries, and it is not uncommon for these patients to die on the operating table.

In a follow-up of the above series, thirty of the children have been found to be greatly improved. Color is good, they eat well and play like other children. All anastomotic channels have remained open as evidenced by improved color and the presence of a continuous murmur going through systole and diastole. Two of the children are improved but have some persistent cyanosis.

Potts, W. J.: *Anastomosis of Aorta to a Pulmonary Artery for Relief of Congenital Pulmonary Stenosis*, *J. Internat. Col. of Surgeons* 10:569-573 (Sept.-Oct.) 1947.



## Stillbirths

The number of stillbirths at present is about 65,500 a year. It appears that the chances of being born alive are best for the second child and decrease progressively for each successive child.

The stillbirth ratio among second children in this country, exclusive of Massachusetts, for the period 1940 to 1944 was 18.5 per thousand live births, while the ratio for the first born was 24.4. Births of the seventh order were twice as likely to be stillborn as were those of the second order. For the tenth and later born the ratio was three times as great.

One of the most important factors in stillbirths is the age of the mother. The tendency of the stillbirth rate is to rise with an increase in age.

When a mother is in the age group from 20 to 24 years, her child is more likely to be born alive than are children of mothers from 30 to 34. In this latter age group, the ratio of stillbirths to live births is more than 50 per cent greater. Among mothers from 35 to 39, the ratio of stillbirths to live births doubles; it is three times as great from 40 to 44 and at least four times as great at 45 and over as it is from 20 to 24 years.

The stillbirth ratio is relatively high among mothers who bear a large number of children in rapid succession. Mothers under 20 years of age who bear their fourth child show a considerably higher stillbirth ratio than do mothers in any other age group up to 40 years. The same is true for women who bear their sixth child as early as 20 to 24 years.

The hazard of stillbirths could be further reduced if more mothers received medical care early in pregnancy. This is particularly true for pregnant women at both extremes of the child-bearing period.

*The Chances of Being Born Alive*, *Statist. Bull. Metrop. Life Insurance Co.* 28:4 (November) 1947. *Current Comment*, *J. A. M. A.* 136:558 (February 21) 1948.



## Cancer—Recent Advances

The trend of recent advances in cancer treatment is changing. It is toward more radical surgery on the one hand and toward new biochemical approaches on the other. Essentially, this means a strengthening of the position of surgery as a curative agent along with an intensified search for new means of palliation and control.

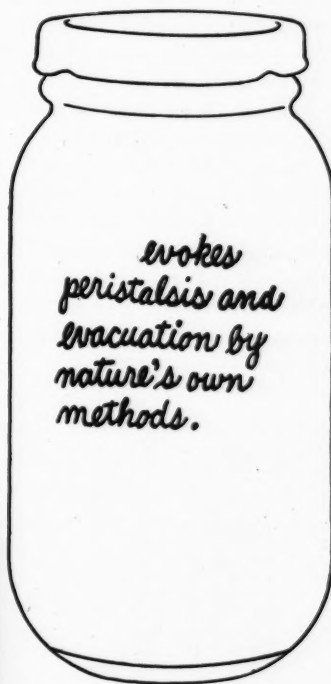
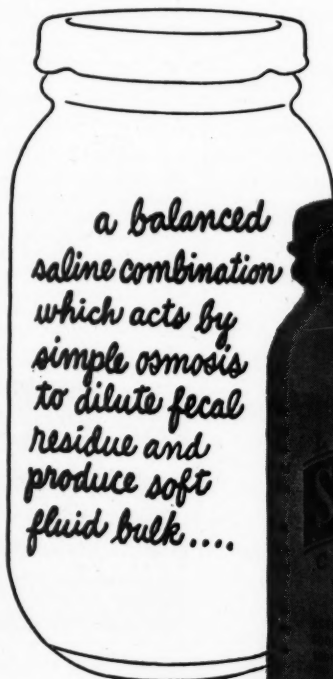
The results of cancer treatment, to be successfully evaluated, should be noted for at least a five-year period. The chemosurgical treatment in its present concept is too new to be fully evaluated. However, results to date

 \* *Aperient*

 \* *Laxative*

 \* *Cathartic*

\* *Average dose*



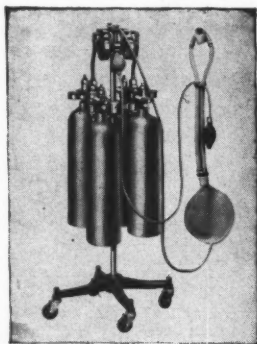
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are more encouraging than at any other period.

Nowhere is the drift toward radical surgery seen more clearly than in the treatment of neoplasms of the oral cavity and the upper respiratory tract. Prognoses of cancers of the mouth and associated structures vary greatly according to the site of the cancerous growth. Therefore, statistical proof of the value of extensive surgery is not yet available. However, sufficient evidence is available to show that much oral cancer is actually susceptible of cure if bold measures are undertaken by competent operators.

The question of the most effective treatment of laryngeal cancer is still debated by surgeons. Some believe that radiation therapy of cancer of the larynx is to be preferred. Others do more surgery and as a consequence feel that they save more lives.

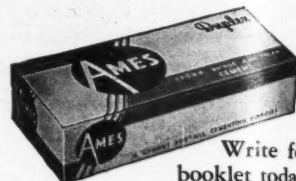
It is difficult to conceive of diagnostic criteria and acumen so accurate as to determine reliably the prognosis of a given case of laryngeal cancer if it is treated by roentgen irradiation. On the basis of facts now available, surgery probably saves 50 per cent more lives even though some larynxes are sacrificed. It is worthwhile as most persons prefer their lives to their larynxes. Modern techniques for the development of the esophageal voice have bettered the end result to a great extent.

Curative treatment of cancer of the breast is surgical. It appears that the exceedingly radical procedure of amputating the cancerous breast is not always required. Although it was once believed that the wholly autonomous cancer was never cured, this concept is not supported by the results from many clinics.

Hormone therapy has played an important role in the palliative care of patients with metastatic disease of the breast. In general, its action is irregular and transiently effective. The administration of testosterone propionate produces striking results in about 15 per cent of the patients treated. The benefits are of varying duration.

Extensive operative procedure has been carried out in abdominal cancer. The prognosis for abdominal can-

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Next is taken up the general care of the patient. Then dentoalveolar surgery—the extraction of teeth, giving both the closed and open methods of extraction. Alveoplasty, correction of abnor-

malities of the labial and lingual frenums, periodontal surgery are all covered.

Fractures are gone into in detail in the section entitled "The Treatment of Traumatic Diseases of the Jaws." This is one of the most complete discussions of fractures of the face and jaws yet published. All sections are extremely well illustrated. Osteomyelitis is gone into thoroughly. Infections of the face and neck are covered in an exhaustive section.

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cer is poor indeed. Doctor A. Brunschwig reports for 100 cases of abdominal cancer 13 per cent free of disease from two to ten years after surgery. This prolonging of life is certainly well worth the effort.

Cancer of the thyroid gland is being treated with varying degrees of success by a combination of surgery and radioactive iodine. The greatest difficulty lies in inducing the thyroid to take up the iodine. Until such a method is found, therapeutic successes will be few.

Surgery in treatment of cancer of the bladder is yielding encouraging results.

Probably the most noteworthy advance in the treatment of neoplastic diseases during 1946 has been the introduction of nitrogen mustards. Definite results can be noted in selected cases in Hodgkin's disease, myeloid leukemia, lymphosarcoma, and lymphatic leukemia. Cancer of the lung can be caused to regress only temporarily in about 50 per cent of the cases.

These recent findings represent the work of many men over a long period of time. Progress in the future should be more rapid because of better professional and lay attitudes toward the disease.

*Rhoads, C. P.: Recent Advances in Treatment of Cancer, J.A.M.A. 136: 305-308 (January 31) 1948.*

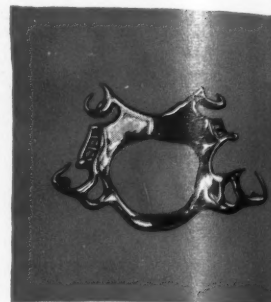
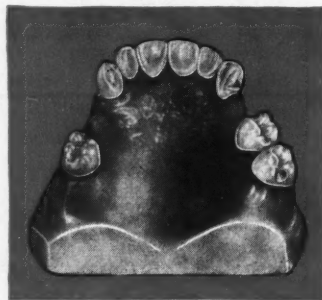


### **Injection by Pressure Jet**

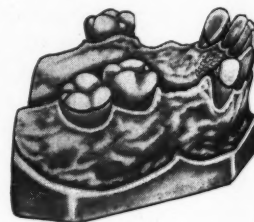
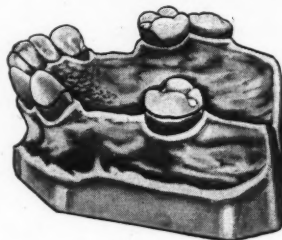
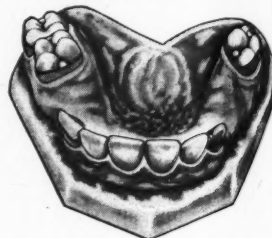
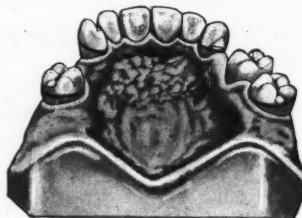
Jet injection is the first fundamental change in hypodermic technique presented for some time. Under pressures of 2,300 to 3,500 pounds per square inch, fine sprays of therapeutic solution pierce the skin almost painlessly. Syringes and needles are eliminated.

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vidual instruments is unnecessary.

Material for injection is placed in a metal ampule encased in an aluminum container. The ampule, shaped like a blunt-nosed bullet, has a 0.003-inch hole in the rounded tip. A rubber plug closes the butt end. For use, the container cap is removed and the ampule is locked securely in the front end of the injecting instrument.

The injection device is about the size of a two cell flashlight. It contains a calibrated high tension spring

controlled by a button at the back end. Pressure on the button releases the spring which propels a metal plunger against the rubber plug in the butt of the ampule. The liquid contents are forced through the minute opening as a fine spray at high velocity. Any portion of the contents may be injected.

The skin should be allowed to dry after alcohol cleansing before the injection is made. A moist skin tends to allow the blunt end of the ampule to



Occlusal rests, correctly planned and located, are a vital element of design in every partial. Properly handled, they can contribute a great deal to the life and comfort of the case, while their omission can do irreparable damage in a short space of time.



On this upper, the right cuspid has been prepared to take a mesio-incisal hook, while the left cuspid shows the distolingual slice preparation with square floor. Of these two rest preparations for anterior teeth the mesio-incisal hook is the best from a functional standpoint because of superior occlusal support. The distolingual slice is preferable for esthetic reasons.

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slip. Slipping may produce a superficial cut.

After the release button is pressed the instrument should be held firmly against the skin from two to three seconds so that all the contents are delivered subcutaneously. Otherwise material may be squirted over the surface of the skin or raise an intra-dermal wheal.

Penetration of the injected material depends on the pressure of the jet and the resistance of the tissues, particu-

larly the skin and fascia. Tissue resistance varies chiefly with age. As a rule material is dispersed over an area of 1 or 2 centimeters or even more when injected into the upper arm or thigh.

The procedure is still limited in use because of the cost of the instrument and metal ampules. It has optimal use in injections of amounts of only 0.25 cubic centimeters. A large number of inert containers is required for different active drugs. There is some

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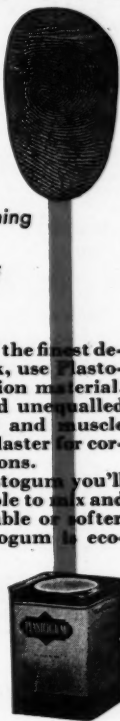
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possibility of tissue injury from high pressure. When slow absorption is desired, the wider dispersion of material is undesirable. Solutions used must have low viscosity to allow them to pass through the minute opening in the ampule.

However, for immunization of large groups the process holds possibilities so far as time and effort are concerned.

Hingson, R. A., and Hughes, J. G.: *Clinical Studies with Jet Injection, Anesth. and Analg.* 26:221-230 (March) 1947.



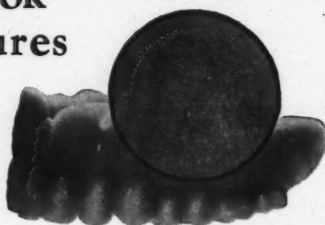
### Mental Deficiency—Prenatal Origin

Research in unrelated fields has revealed a number of possible prenatal causes of mental deficiency. The problem is one for serious consideration as data show that 2 to 4 per cent of the population has some degree of subnormal mental development.

Between 30 to 40 per cent of the severe cases of mental deficiency oc-

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(See page 287)

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cur in families from which normal offspring could be expected. The *cause of idiocy* is antenatal in 50 per cent of the cases; the *cause of imbecility* is antenatal in 40 per cent of the cases of this type.

Along with mental deficiency are included certain forms of blindness and deaf mutism. Both these conditions are considered because they confine many patients to institutions and because their causes are often strikingly similar to those of feeble-mindedness.

Numerous hereditary traits produce mental deficiency with or without conspicuous gross malformations. Therefore, eugenics to be successfully carried out, must be based upon a thorough understanding of genetics. American advocates of eugenics recommend voluntary measures, often only in the form of informing prospective parents about the probability of having abnormal offspring.

In twenty-four states there is some authorization for sterilizing the mentally deficient. Eugenics presents problems with religious, political, legal, and financial aspects.

One of the most prominent fetal infections producing lesions leading to defects of mental development, eye sight, or hearing is *syphilis*. Antisyphilitic treatment of mothers has been widely adopted with a resultant diminution of the frequency of congenital syphilis. Sixty-four and one-half per cent of the infants born of untreated syphilitic mothers are infected in utero. Eye lesions are found in one per cent of these early cases and in 30 to 55 per cent of the later cases.

In 1946, thirty-two states in this country required a serologic test for syphilis from both applicants for a marriage license. Despite this control there is still a considerable number of infants born with manifest or hidden syphilitic infection. The pathology of the lesions in the newborn does not differ from that of the lesions of syphilis acquired after birth.

Certain virus diseases, especially rubella, contracted by the mother in the early months of pregnancy lead to a high percentage of malformations. In fact, some authorities maintain that rubella in the first or second

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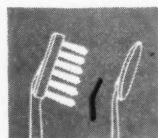
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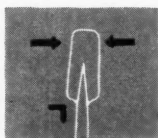
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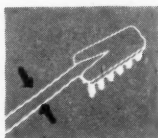
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## CLINICAL AND LABORATORY SUGGESTIONS

(See pages 268 and 269)

Form to be Used by Contributors

To: Clinical and Laboratory Suggestions Editor  
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708 Church Street  
Evanston, Illinois

From: \_\_\_\_\_

Subject: \_\_\_\_\_

Explanation of Procedure:

Sketch:

\$10 will be paid to author on publication of accepted suggestions.

month of pregnancy results in malformations including mental deficiency and blindness in nearly 100 per cent of the infants of these mothers. At present too little is known to formulate definite conclusions. However, some believe that macroscopic findings justify interruption of pregnancy in mothers afflicted with rubella.

In the field of endocrinology it has been well established that deficiencies of both the thyroid and pituitary glands may result in a varying degree of physical and mental deficiency in infants. The Rh factor plays an important role in the welfare of the infant. A fetal oxygen deficiency may cause brain damage with subsequent mental deficiency.

Gruenwald, Peter: *Mental Deficiency of Prenatal Origin*, Am. J. M. Sc. 214:605-611 (December) 1947.

## Contra- Angles



### City of Billions of Words . .

If anybody is subject to dizziness, Washington is not the place for him. Wherever you go in that city, you may expect to hear the inside information on everything. The taxi drivers talk of the coming war in the same cheery tone that they describe the famed cherry blossoms. The fate of men and of nations is disposed of by the clicking of a bartender's tongue. No one talks in less than million dollar terms. If something can be said in a thousand words, there is no sense in using a few dozen. Words and money are thrown around on a grand scale.

Washington is the happy hunting ground of the publicity agents and the public relations counsels who pour forth tons of paper every year hoping that some of it will be seized upon and the handouts printed by lazy editors of newspapers and maga-

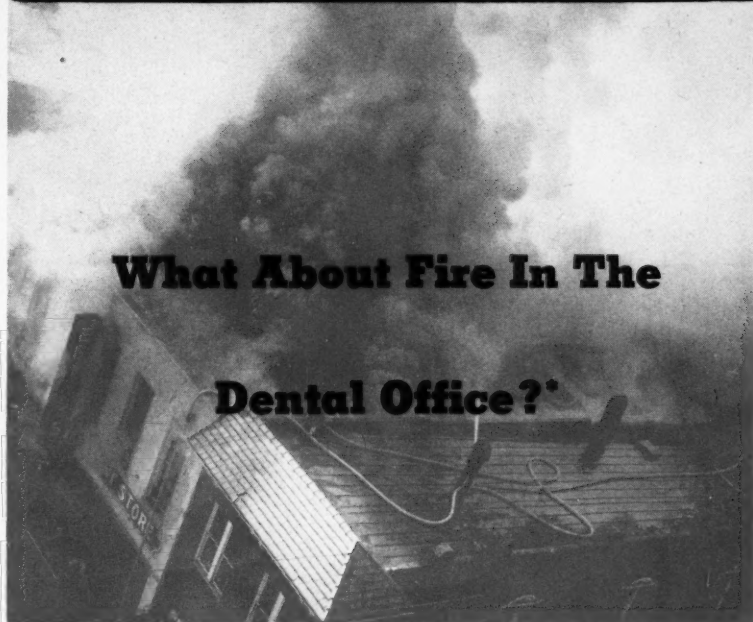
zines. The backs of postmen throughout the land are made weary from the loads of postage-free mail that come out of Washington.

I have just returned from the meeting of the National Health Assembly. It is hard to do an objective job of reporting because of the buffeting waves of conflicting opinion that inundate one in Washington. Eight hundred people spent their time and their own money to attend this meeting. For four days the delegates worked long and earnestly. They submitted their report for a ten-year health program to Mr. Oscar R. Ewing, the Federal Security Administrator, who will pass along what he likes in the form of recommendations to President Truman. Mr. Truman will, in turn, use what he wishes either in his campaign for re-election or in urgings to Congress.

Mr. Truman and Mr. Ewing, like the rest of us, have their friends and also people who dislike them. The people who are not fond of them say that the National Health Assembly was a sinister plot to get support for a federalized health plan, probably compulsory health insurance. These critics point out that Mr. Ewing went, hat in hand, to the funds and foundations and collected \$45,000 from the following sources to finance the Assembly: The Milbank Fund, American Cancer Society, American Red Cross, Infantile Paralysis Foundation, and the Lasker and Rosenwald Funds. No money came from the Great White Father which, in itself, is something unusual in Washington.

These unfriendly critics of Mr. Truman and Mr. Ewing point out that the Milbank, Lasker, and Rosenwald people have been carrying on a thumping propaganda for years for compulsory health insurance. I have heard no explanation from the critics, however, that would explain how the American Cancer Society, American Red Cross, Foundation for Infantile Paralysis, could possibly profit from a compulsory federal health plan. These organizations are all voluntary and depend upon private donations for support. In fact, they are the organizations that Morris Fishbein points to with pride when he

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### What About Fire In The Dental Office?

It's natural not to think very much about fire hazards—until it's too late. Last year nearly *seven hundred million* dollars' worth of property was destroyed by fire and more than *ten thousand* people were killed in fires. Because your dental office *seems* relatively safe, you may have overlooked some of the simple precautions that could prevent serious loss by fire. The National Board of Fire Underwriters has prepared an article describing these precautions. It's wise to check fires *before they start*, and this article will help every dentist make a "safety inventory" of his office.

★ ★ ★

Babe Ruth is dental news! After three operations and the agony of constant head pains, Babe Ruth is back on the road to recovery—aided by dental treatment. The correction of malocclusion relieved the pain, and the famous Bambino began to eat and sleep and regain some of the weight he had lost. The story, written by Guy Butler, sports editor of the *Miami Daily News*, is a spectacular illustration of the importance of dental treatment to general health.

★ ★ ★

"Should My Sons Study Dentistry?"—Whether you have sons or not, Doctor Herbert G. Frankel's article

will be of interest. He discusses the problems connected with entering the dental profession today—and other problems which worry the older dentists as well as the younger ones.

★ ★ ★

"What is the National Committee of Dentists?"—The Chairman of the committee, Doctor A. P. Williams, explains the purpose and functions of this committee which, with the National Physicians Committee, is registered under the Federal Regulation or Lobbying Act.

★ ★ ★

"I Feel Sorry for Dental Patients," says Doctor George A. Swendiman of North Dakota, and gives some of the reasons why. This article gives case histories of several unfortunate dental patients who were the victims of negligence and carelessness on the part of the dentist.

★ ★ ★

"Can You Take It, Doctor?"—After feeling sorry for some of the patients, check up on your treatment of *yourself*. Dentists can do irreparable damage to their bodies and minds by refusing to be as considerate of themselves as they are of their demanding patients. Doctor Joseph Murray believes that many are unnecessarily shortening their lives by suffering from psychologic conflicts.



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wishes to emphasize the advantage of a voluntary plan over a compulsory one. This year, according to Doctor Fishbein, the American people will by their own generosity and from their own earnings contribute \$17,000,000 to the Infantile Paralysis Foundation; \$5,000,000 to the American Heart Association; \$13,000,000 to the American Cancer Society.

The detractors of Mr. Truman and Mr. Ewing say that Ewing had his report to the President *written in advance* of the Assembly. That I doubt. No administrator would be likely to be so stupid that he would antagonize at the outset the exact group that he would be required to work with in any kind of federal health program.

I know little of Mr. Ewing's background and experience. He was prompt to state that he is a lawyer but is not an expert in any phase of public health. He also stated that he was "strong for compulsory health insurance" but that he had "an open mind on the subject." Mr. Ewing, as he stood before the Assembly and talked with the twang of his native Indiana, gave the impression that he was an earnest fellow, hopeful of finding the solution to an enormous problem. In research he favored government participation only to the extent that other agencies could not do the job. Industry, the foundations, and the universities, should be encouraged to carry on research with the aid of and support from government, if necessary. He favored the stimulation of community response and the development of local health councils.

In his opening remarks before the Assembly, Mr. Ewing deplored the energies and the emotions that have been expended in the controversy over compulsory health insurance. He asked for agreement in the non-controversial areas.

The delegates seemed to be in enthusiastic and unanimous agreement that government funds might be spent for research; for the subsidization and training of professional personnel; for the expansion of hospitals, medical, dental, and nursing schools; and for public health education. The only controversy that flared



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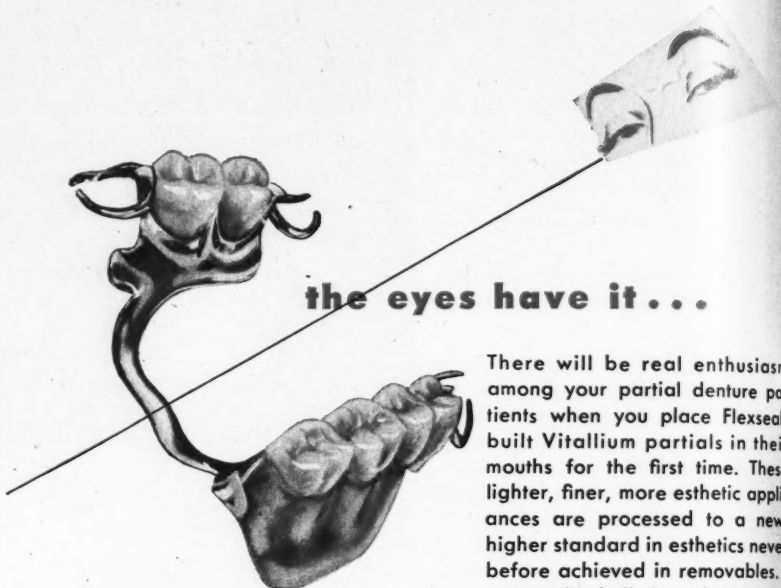
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in the open was the charge made by a representative of the American Federation of Labor that a representative of the American Medical Association had taken an unfair advantage in one of the general sessions and made an attack on compulsory health insurance without an opportunity being given for the American Federation of Labor to speak in favor of the subject.

Unlike the conference in 1938, which was a fighting meeting with deep hostilities and name-calling, the Assembly of 1948 was calm, orderly, and free from tensions between the representatives of the "producers" of medical care and the "consumers" of it. In fact, after the Assembly of 1948 had adjourned, Mr. Ewing received telegrams of commendation from two men whose names have never been identified with governmental control programs or with Communistic leanings: "Again my sincere congratulations on the best meeting of its kind I have ever attended in Washington. Please send me full particulars on the availability of complete reports for publication. Morris Fishbein."

"Heartiest congratulations on your courage and foresight in calling National Health Assembly meeting. Was particularly pleased with willingness to cooperate shown by all. You have broken down barriers that have kept honest people apart. I see no reason why your objective of health care for all the American people, regardless of race, color or creed, cannot be achieved. Once again by your own personal effort, you have laid the foundations of a better understanding at every level of a problem that has plagued us for many years. Reverend D. A. McGowan."

President Truman appeared before the Assembly and made a favorable and friendly impression. He spoke pleasantly and informally (not in his usual declamatory, schoolboy manner) as a representative of the great middle class of Americans who has seen his friends and relatives in sickness and in death, in poverty and good fortune, in pain and in happiness. As one who sprang from the middle class, he knows that some people cannot afford full treatment



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by dentists and physicians, and he also knows that many of our people, particularly in rural areas, cannot find good practitioners even if they can afford them.

I have no disposition to write as one of the Washington correspondents who are the seers and prophets, the keyhole peepers and the mystics of journalism. You cannot be around Washington for long, however, before you get definite impressions of the

political scene. I have the feeling that, regardless of who is elected President, there will be increasing pressure for some kind of extensive national health program. It will probably *not* be compulsory health insurance. Nor will it be a system based on the pauper's oath or the "means test." All groups represented at the Assembly were in agreement that prepayment is the best way to pay for health care. All groups agreed that all people are



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entitled to health care. How to prepay is the issue.

There was no unanimity as to whether the payment should be voluntary or compulsory although the undercurrent of sentiment suggested that a compromise might be reached on some form of voluntary contributory insurance. The word "contributory" might mean that the insured, the employer, and the government all make contributions to the plan.

William C. Menninger, the Chairman of the Mental Health Section, said that the person who is mentally ill was not in need of "placebos and platitudes" but needed definite treatment. The same might be said about the sickness of society. A placebo is "a medicine given to please or gratify the patient." A platitude is "a thought or remark that is flat, dull, trite, or weak." If the health of the nation is as bad as the people before the Na-

tional Health Assembly stated it is (and there is no reason to believe otherwise) the public will expect a concrete, workable, practicable health plan. If any politician attempts to give them "placebos and platitudes" on the subject, the people should be smart enough to see the deception.

Billions of words were poured forth by eight hundred people in four days at the National Health Assembly. Most of the words made sense. They were spoken from sincere hearts and in a serious effort to better the health of mankind. To be sure, there were some special pleaders present and the representatives of pressure groups were carrying on their dubious activities. This one reporter came away with the feeling that the Assembly was not a political trick but an honest effort of American citizens to come together in democratic assembly and by free debate to arrive at a program for "the greatest good for the greatest number." No one can ask for more than that.—E. J. R.

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